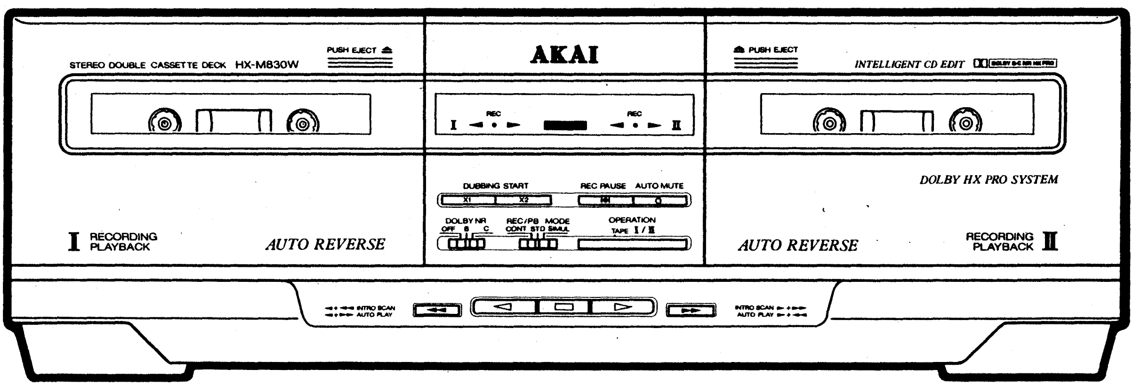
AKAI SERVICE MANUAL


STEREO DOUBLE CASSETTE DECK HX-M830W
PUSH EJECT
AKAI
PUSH EJECT
INTELLIGENT CD EDIT
REC
I
REC
II
DOLBY HX PRO SYSTEM
DUBBING START
X1
X2
REC PAUSE
AUTO MUTE
DOLBY NR
OFF B C
REC/PB MODE
CONT STD SIMUL
OPERATION
TAPE I / II
I RECORDING PLAYBACK
AUTO REVERSE
AUTO REVERSE
RECORDING PLAYBACK II
INTRO SCAN
AUTO PLAY
INTRO SCAN
AUTO PLAY

MODEL HX-M830W

STEREO DOUBLE CASSETTE DECK

MODEL HX-M630W
MODEL HX-M830W

SPECIFICATIONS

MODEL HX-M630W

Track system	4 track 2 channel stereo
Heads	
TAPE 1	HD head for playback x 1
TAPE 2	HD head for recording and playback x 1 Erase head x 1
Motors	Electronically controlled DC motor x 2
Wow & flutter	
TAPE 1	0.18 % (DIN), 0.09 % WRMS
TAPE 2	0.14 % (DIN), 0.06 % WRMS
S / N ratio	57 dB
Dolby B type NR switch ON	Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz
Dolby C type NR switch ON	Improves up to 15 dB at 500 Hz, 20 dB at 1 kHz to 10 kHz
T.H.D	Less than 0.7 %
Frequency response	
Normal	30 Hz to 14,000 Hz ± 3 dB
CrO_2	30 Hz to 15,000 Hz ± 3 dB
Power requirements	Supplied from amplifier
Dimensions	360 (W) x 117 (H) x 295 (D) mm
Weight	2.9 kg

MODEL HX-M830W

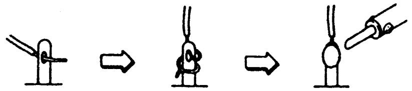
Track system	4 track 2 channel stereo
Heads	
TAPE 1	HD head for recording and playback x 1 Erase head x 1
TAPE 2	HD head for recording and playback x 1 Erase head x 1
Motors	Electronically controlled DC motor x 2
Wow & flutter	
TAPE 1	0.14 % (DIN), 0.06 % WRMS
TAPE 2	0.14 % (DIN), 0.06 % WRMS
S / N ratio	57 dB
Dolby B type NR switch ON	Improves up to 5 dB at 1 kHz, 10 dB above 5 kHz
Dolby C type NR switch ON	Improves up to 15 dB at 500 Hz, 20 dB at 1 kHz to 10 kHz
T.H.D	Less than 0.7 %
Frequency response	
Normal	30 Hz to 14,000 Hz ± 3 dB
CrO_2	30 Hz to 15,000 Hz ± 3 dB
Metal	30 Hz to 15,000 Hz ± 3 dB
Power requirements	Supplied from amplifier
Dimensions	360 (W) x 117 (H) x 295 (D) mm
Weight	3.2 kg

*For improvement purposes, specifications and design are subject to change without notice.
*Noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
DOLBY and the double-D symbol ◻◻ are trademarks of Dolby Licensing Corporation.

★ SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts indentified by the ⚠ (✱) symbol are criti cal for safety. Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (Insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors,etc.), wrap ends of wires securely about the terminals before soldering.



6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors,fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, soldedr oplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resister of 1500 ohms paralleled with a 0.15 μF capacitor, under the unit's normal working conditions. The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 Mohms.

★ INFORMATIONS

SYMBOLS FOR PRIMARY DESTINATION

Primary destnations of units are indicated with the following alphbetic.

Symbol	Primary Destinations
A	USA
B	UK
C	Canada
E	Europe (except UK)
J	Japan
S	Australia
V	Germany
U	Universal Area
Y*	Custom version

[PRECAUTIN ABOUT THE POWER SUPLLY]

Power supply and power control data for the HX-M630W/M830W are supplied from the amplifier and tuner. Therefore when repair of the HX-M630W/M830W is necessary, repair should be made together with the amplifier and tuner. To repair the HX-M630W/M830W without the tuner, use the following procedure.

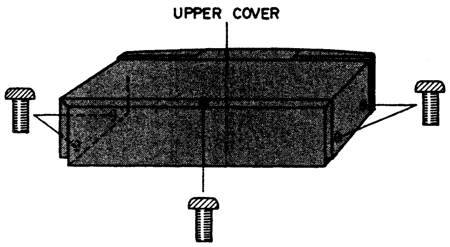
1) While pushing the G.E REC button on the amplifier, press the POWER button on the amplifier to turn the power of the amplifier on.
2) Remove the cover of the HX-M630/M830 and short the following main circuit board test points.
   HX-M630.........short JW29 and JW30
   HX-M830.........short JW118 and JW119

To turn off the power of the amplifier and HX-M630W/M830W, the AC power cord must be disconnected.

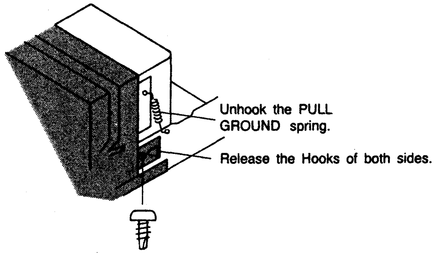
I. DISASSEMBLY

In case of trouble, etc., necessitating dismantling, please dismantle in the order shown in the illustrations.
Reassemble in reverse order.

1. Removal of UPPER COVER



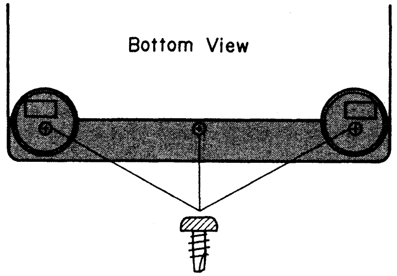
3.



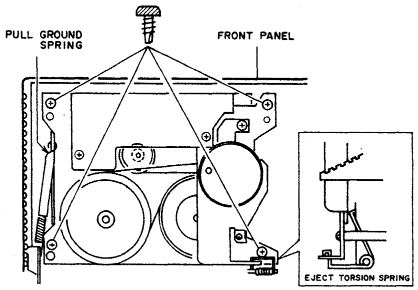
Unhook the PULL GROUND spring.

Release the Hooks of both sides.

2. Removal of the FRONT PANEL



4. Removal of the MECHA. BLOCK



1) Unhook the PULL GROUND and EJECT TORSION SPRINGS, then remove the four MECHA. BLK fixation screws.

II. PRINCIPAL PARTS LOCATION

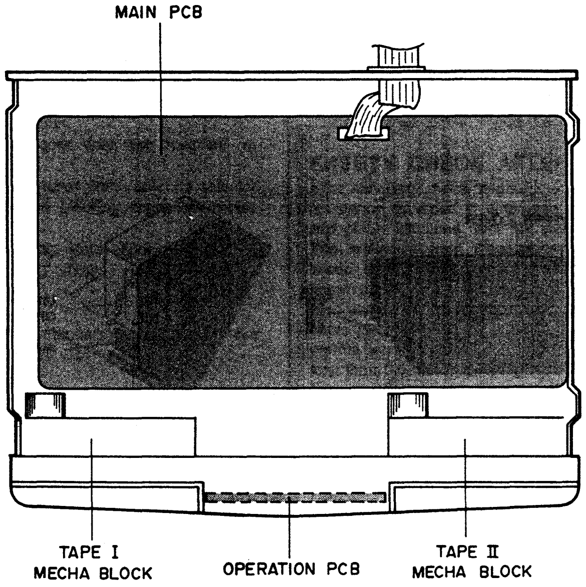

MAIN PCB
TAPE I
MECHA BLOCK
OPERATION PCB
TAPE II
MECHA BLOCK

Fig. 2-1 Top view

III. MECHANICAL ADJUSTMENT

[PRECAUTION]

- * Before adjustment, clean and de-magnetize the heads and tape guides.
- * Do not use the magnetized tools for the following adjustments.

3-1. CONFIRMATION OF THE WINDING TORQUE IN EACH MODE

Insert a CASSETTE TORQUE METER (AT-751179) and measure the torque in each mode.
For fast forward and rewind, measure the torque at the end of the tape when tape has stopped running.

[PLAY BACK mode]
Take up torque : 35 to 75 g-cm
Back tension torque : 2 to 6 g-cm

[FAST FORWARD and REWIND mode]
Take up torque : 70 to 160 g-cm

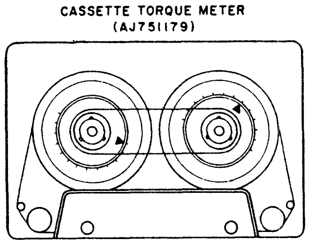

CASSETTE TORQUE METER
(AJ751179)

Fig. 3-1

3-2. ADJUSTMENT OF THE TAPE GUIDE HEIGHT

NOTE: This adjustment is not neccessary for the TAPE1 MECHA. BLOCK of the HX-M630W model.

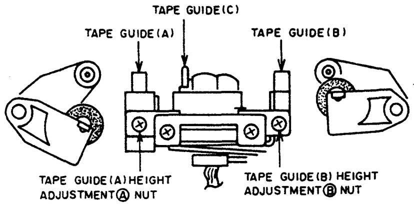

TAPE GUIDE(C)
TAPE GUIDE(A)
TAPE GUIDE(B)
TAPE GUIDE(A)HEIGHT ADJUSTMENTⒶ NUT
TAPE GUIDE(B) HEIGHT ADJUSTMENTⒷ NUT

Fig. 3-2

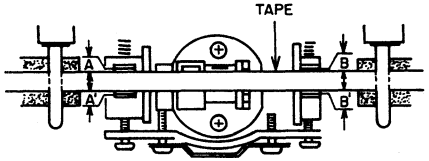


Fig. 3-3

1) Load the MIRROR CASSETTE TAPE (AJ-751178) and engage the FWD PLAY mode.
2) Adjust TAPE GUIDE (A) HEIGHT ADJUSTMENT Ⓐ screw so that both spaces (A and A') on the TAPE GUIDE (A) are equal.
3) Adjust TAPE GUIDE (B) HEIGHT ADJUSTMENT Ⓑ screw so that both spaces (B and B') on the TAPE GUIDE (B) are equal.
4) Repeat above 2) and 3) until tape runs smoothly and without any curls or wrinkle at the TAPE GUIDE (A), (B) and (C).
5) After adjustment, paint-lock the adjustment Ⓐ and Ⓑ screw.

3-3. ADJUSTMENT OF THE PB HEAD AZIMUTH ALIGNMENT

(GAK-5PB MECHA. BLOCK)

NOTE: This adjustment is for the TAPE 1 MECHA. BLOCK of the HX-M630W model only.

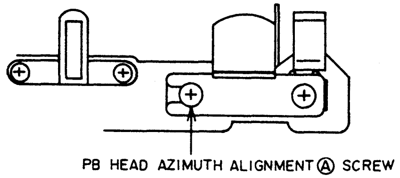

PB HEAD AZIMUTH ALIGNMENTⒶ SCREW

Fig. 3-4

1) Connect the AC milli-voltmeters to L-ch and R-ch of the VCR OUT on the amplifier and connect oscillscope's input CH-1 and CH-2 to output of the AC milli-voltmeters.
2) Play back a 10 kHz (-15 dB), HEAD AZIMUTH ALIGNMENT test tape (AT-750778) and adjust Ⓐ SCREW so that the reading on the AC milli-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase.
3) After adjustment, paint-lock the adjustment Ⓐ SCREW.

3-4. ADJUSTMENT OF THE REC/PB HEAD AZIMUTH ALIGNMENT

(GAK-3600D MECHA. BLOCK)

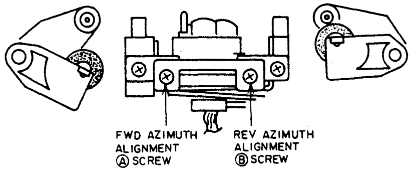

FWD AZIMUTH ALIGNMENT ⒶSCREW
REV AZIMUTH ALIGNMENT ⒷSCREW

Fig. 3-5

1) Connect the AC milli-voltmeters to L-ch and R-ch of the VCR OUT on the amplifier and connect oscilloscope's input CH-1 and CH-2 to output of the AC milli-voltmeters.
2) Play back a 10 kHz (-15 dB), HEAD AZIMUTH ALIGNMENT test tape (AT-750778) and adjustment Ⓐ (FWD PLAY) or Ⓑ (REV PLAY) SCREW so that the reading on the AC milli-voltmeters are at maximum and waveforms on the oscilloscope are in the same phase.
3) After adjustment, paint-lock the adjustment Ⓐ and Ⓑ SCREWS.

IV. ELECTRICAL ADJUSTMENT

4-1. INSTRUMENT CONNECTIONS

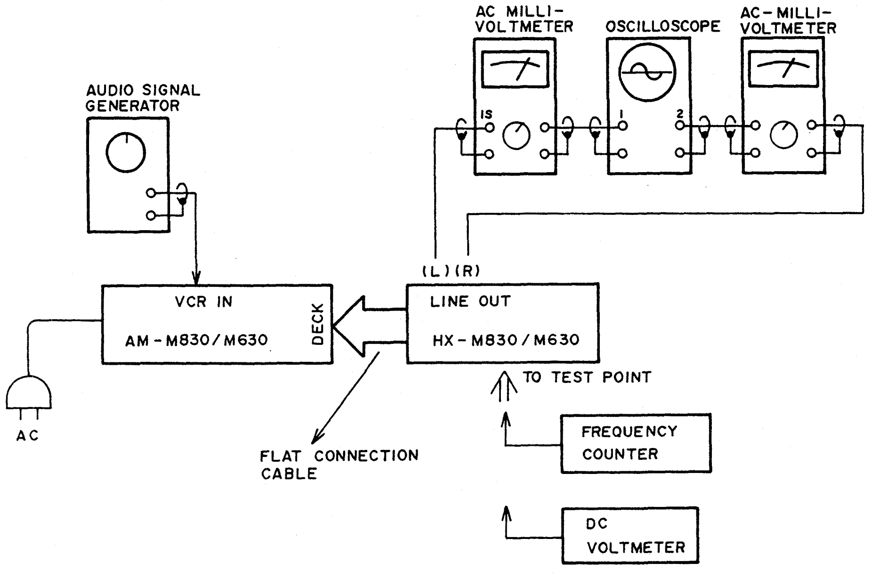

AC MILLI-VOLTMETER
OSCILLOSCOPE
AC-MILLI-VOLTMETER
AUDIO SIGNAL GENERATOR
1S
1
2
(L) (R)
VCR IN
AM-M830/M630
DECK
LINE OUT
HX-M830/M630
TO TEST POINT
AC
FLAT CONNECTION CABLE
FREQUENCY COUNTER
DC VOLTMETER

Fig. 4-1 Instruments connections

4-2. ADJUSTMENT FOR MODEL HX-M630W

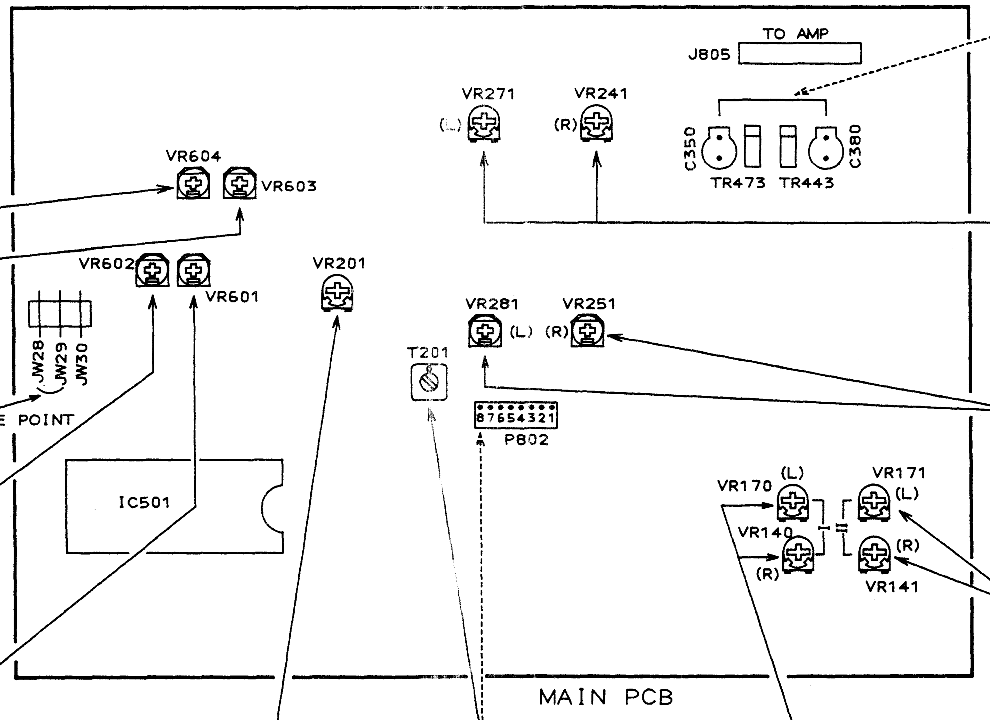
[PRECAUTIONS BEFORE ADJUSTMENT]

1) Before adjustment, clean and de-magnetize heads and tape guides
2) All adjustments should be performed without dolby NR.
3) Use the following cassette tape for adjustment.
   NORMAL position : MAXELL UD I 60
   CrO2 position : TDK SA 60
4) When adjusting bias, Input the input signal through the AMP's VCR IN terminal and set the amp's input selector to the VCR before recording.
5) 0 dBs = 0.775 V

STEP	ADJUSTMENT ITEM
1. TEST TAPE / INPUT SIGNAL	
2. MODE	
3. TEST POINT / ADJUSTMENT PART	
4. REMARKS (•) and RESULT (✻)	

Test point Adjustment part

About the test mode
This unit has an adjustment test mode that must be engaged in order to perform some adjustments. To engage the adjustment mode, proceed as follows.
1. With the power ON, short the jumper wire of test points JW28 and JW29.
2. When the test points are shorted the CD EDIT lamp will light.
3. To cancel the test mode, turn the power off.



4	TAPE II NORMAL TAPE SPEED
1. 3,150 Hz test tape (AT-751263) 2. PLAY 3. LINE OUT / VR604 4. • Connect a frequency counter to the LINE OUT. ✻5 Hz to 10 Hz lower than the result in STEP 2 [TAPE I NORMAL TAPE SPEED].	

3	TAPE II (X2) TAPE SPEED
1. 3,150 Hz test tape (AT-751263) 2. PLAY [Push (X2) DUBBING START button] 3. LINE OUT / VR603 4. • Connect a frequency counter to the LINE OUT. ✻5 Hz to 10 Hz lower than the result in STEP 1 [TAPE I (X2) TAPE SPEED].	

2	TAPE I NORMAL (X1) TAPE SPEED
1. 3,150 Hz test tape (AT-751263) 2. PLAY 3. LINE OUT / VR602 4. • Connect a frequency counter to the amplifier's LINE OUT. ✻3,150 ± 10 Hz	

1	TAPE I (X2) TAPE SPEED
1. 3,150 Hz test tape (AT-751263) 2. PLAY [Push (X2) DUBBING START button] 3. LINE OUT / VR601 4. • Connect a frequency counter to the LINE OUT. ✻6,300 ± 20 Hz	

9	TAPE II CrO2 POSITION BIAS
1. CrO2 recording tape. / 1 kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT) 2. REC PLAY → PLAY (Playback) 3. LINE OUT/ VR201 4. • Connect AC milli-voltmeter to the LINE OUT. ✻Playback level difference between 1kHz and 10 kHz is falt.	

7	TAPE II BIAS OSC FREQUENCY
1. CrO2 recording tape. 2. REC PLAY 3. P802 Pin ⑧ / T201 4. • Connect frequency counter between P802 Pin ⑧ and GND ✻100.0 kHz	

5	TAPE I PB LEVEL
1. 315 Hz test tape (AT-750773) 2. PLAY 3. LINE OUT / VR170 (L-ch), VR140 (R-ch) 4. • Connect AC milli-voltmeters to the LINE OUT. ✻-6.0 dBs	

LINE OUT
* Connect the AC mili-voltmeters or other instrument between condencer and GND.
L ch : C380 ⊖ ↔ GND.
R ch : C350 ⊖ ↔ GND.

10	TAPE II REC LEVEL
1. NORMAL recording tape / 1 kHz (VCR IN), -6.0 dBs (LINE OUT) 2. REC PLAY PLAY (Playback) 3. LINE OUT / VR271 (L-ch), VR241 (R-ch) 4. • Connect AC milli-voltmeter to the LINE OUT. ✻-6.0 dBs	

8	TAPE II NORMAL POSITION BIAS
1. NORMAL recording tape. / 1 kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT) 2. REC PLAY → PLAY (Playback) 3. LINE OUT / VR281 (L-ch), VR251 (R-ch) 4. • Connect AC milli-voltmeter to the LINE OUT. ✻Playback level difference between 1kHz and 10 kHz is flat.	

6	TAPE II PB LEVEL
1. 315 Hz test tape (AT-750773) 2. PLAY 3. LINE OUT / VR171 (L-ch), VR141 (R-ch) 4. • Connect AC milli-voltmeters to the LINE OUT. ✻-6.0 dBs	

4-3.ADJUSTMENT FOR MODEL HX-M830W

[PRECAUTIONS BEFORE ADJUSTMENT]

1) Before adjustment, clean and de-magnetize heads and tape guides.
2) All adjustments should be performed without dolby NR.
3) Use the following cassette tape for adjustment.

NORMAL position	: MAXELL UD I 60
CrO2 position	: TDK SA 60
METAL Position	: TDK MA 60

4) When adjusting bias, Input the input signal through the AMP's VCR IN terminal and set the amp's input selector to the VCR before recording.
5) 0 dBs = 0.775 V

About the test mode

This unit has an adjustment test mode that must be engaged in order to perform some adjustments. To engage the adjustment mode, proceed as follows.

1. With the power ON, short the jumper wire of test points JW117 and JW118.
2. When the test points are shorted the CD EDIT lamp will light.
3. To cancel the test mode, turn the power off.

LINE OUT

∗ Connect the AC mili-voltmeters or other instruments between jumper wire and GND.
L ch : JW202 ↔ GND.
R ch : JW198 ↔ GND.

STEP | ADJUSTMENT ITEM

1. TEST TAPE / INPUT SIGNAL
2. MODE
3. TEST POINT / ADJUSTMENT PART → Test point, Adjustment part
4. REMARKS (•) and (∗) RESULT

1 TAPE I (X2) TAPE SPEED

1. 3,150 Hz test tape (AT-751263)
2. PLAY [Push (X2) DUBBING START button]
3. LINE OUT / VR701
4. • Connect a frequency counter to the LINE OUT.
∗6,300 ± 20 Hz

2 TAPE I NORMAL (X1) TAPE SPEED

1. 3,150 Hz test tape (AT-751263)
2. PLAY
3. LINE OUT /, VR702
4. • Connect a frequency counter to the LINE OUT.
∗3,150 ± 10 Hz

3 TAPE II (X2) TAPE SPEED

1. 3,150 Hz test tape (AT-751263)
2. PLAY [Push (X2) DUBBING START button]
3. LINE OUT / VR703
4. • Connect a frequency counter to the LINE OUT.
∗5 Hz to 10 Hz lower than the result in STEP 1 [TAPE I (X2) TAPE SPEED].

4 TAPE II NORMAL TAPE SPEED

1. 3,150 Hz test tape (AT-751263)
2. PLAY
3. LINE OUT/ VR704
4. • Connect a frequency counter to the LINE OUT.
∗5 Hz to 10 Hz lower than the result in STEP 2 [TAPE I NORMAL TAPE SPEED].

5 TAPE I PB LEVEL

1. 315 Hz test tape (AT-750773)
2. PLAY
3. LINE OUT/ VR101 (L-ch), VR151 (R-ch)
4. • Connect AC milli-voltmeters to the LINE OUT.
∗-6.0 dBs

6 TAPE II PB LEVEL

1. 315 Hz test tape (AT-750773)
2. PLAY
3. LINE OUT/ VR102 (R-ch), VR152 (R-ch)
4. • Connect AC milli-voltmeters to the LINE OUT.
∗-6.0 dBs

7 TAPE I BIAS OSC FREQUENCY

1. METAL recording tape.
2. REC PLAY
3. FR901 / T901, T902
4. • Connect a DC voltmeter to FR901
∗Minimum DC voltage

8 TAPE I BIAS OSC FREQUENCY

1. METAL recording tape
2. REC PLAY
3. P101 Pin ⑧ / T501
4. • Connect frequency counter between P101 Pin ⑧ and GND.
∗100.0 kHz

9 TAPE I NORMAL POSITION BIAS

1. NORMAL recording tape. / 1 kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR901 (L-ch), VR902 (R-ch)
4. • Connect AC milli-voltmeter to the LINE OUT.
∗Playback level difference between 1kHz and 10kHz is flat.

10 TAPE I CrO2 POSITION BIAS

1. CrO2 recording tape. / 1 kHz and 10kHz (VCR IN), -26 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR501
4. • Connect AC milli-voltmeter to the LINE OUT.
∗Playback level difference between 1kHz and 10kHz is flat.

11 TAPE I METAL POSITION BIAS

1. METAL recording tape. / 1 kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR502
4. • Connect AC milli-voltmeter to the LINE OUT.
∗Playback level difference between 1kHz and 10 kHz is flat.

12 TAPE I REC LEVEL

1. NORMAL recording tape. / 315 Hz (VCR IN), -6.0 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR301 (L-ch), VR351 (R-ch)
4. • Connect AC milli-voltmeter to the LINE OUT.
∗-6.0 dBs

13 TAPE II BIAS OSC FREQUENCY

1. METAL recording tape.
2. REC PLAY
3. P102 Pin ⑧ / T551
4. • Connect frequency counter between P102 Pin ⑧ and GND.
∗100.0 ± 0.2 kHz

14 TAPE II BIAS DIP POINT

1. METAL recording tape
2. REC PLAY
3. FR901 / T951, T952
4. • Connect a DC voltmeter to FR901
∗Minimum DC voltage

15 TAPE II NORMAL POSITION BIAS

1. NORMAL recording tape. / 1 kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR553 (L-ch), VR554 (R-ch)
4. • Connect AC milli-voltmeter to the LINE OUT.
∗Playback level difference between 1kHz and 10kHz is flat.

16 TAPE II CrO2 POSITION BIAS

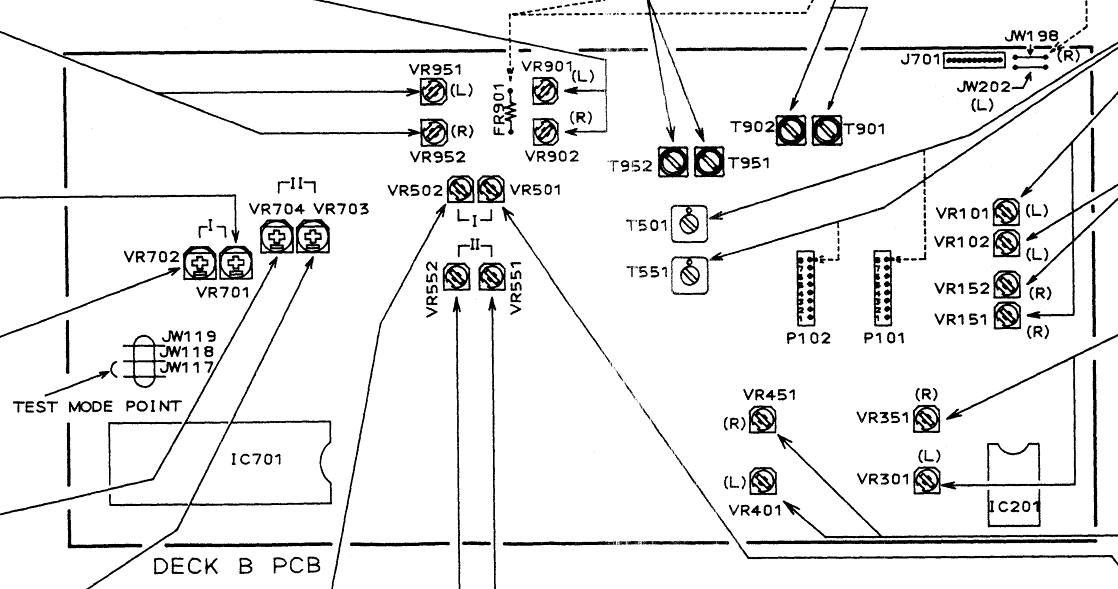
1. CrO2 recording tape. / 1 kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR551
4. • Connect AC milli-voltmeter to the LINE OUT.
∗Playback level difference between 1kHz and 10 kHz is falt.

17 TAPE II METAL POSITION BIAS

1. METAL recording tape. / 1kHz and 10 kHz (VCR IN), -26 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR552
4. • Connect AC milli-voltmeter to the LINE OUT.
∗Playback level difference between 1kHz and 10 kHz is falt.

18 TAPE II REC LEVEL

1. NORMAL recording tape / 1 kHz ((VCR IN), -6.0 dBs (LINE OUT)
2. REC PLAY → PLAY (Playback)
3. LINE OUT / VR401 (L-ch), VR451 (R-ch)
4. • Connect AC milli- voltmeter to the LINE OUT.
∗-6.0 dBs



V. PARTS

1. When plac
Otherwise,
2. Please ma
If not, a pa
3. Since the
please use

1. This Parts Li
tors and capa
and stocked.
2. The Recomm
ant for service
3. Parts not sho
4. How to read t

a) Mechanism

2. HEAD BAS

Ref. No.	Part No.
1	BH-T2023A
2	HP-H2206A
3	ZS-477876
4	ZS-536488
5	ZG-402895

The available
5. When Part No
by its Referen

⚠ (∗) INDICA
CRITICAL CO

⚠ (∗) IL INDI
SÉCURITÉ DI
FABRICANT.

V. PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list Part No., Model No. and the description of eachpart. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.**
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U,E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] : AAL (U.S.A)
[S] : SAA (Australia)
[B] : BEAB (England)
[U] : U/T (Universa Area)
[C] : CSA (Canada)
[E] : CEE (Europe)
[V] : VDE (W. Germany)
[J] : JPN (Japan)
[Y] : Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No.listed at right of Part No.

WARNING

⚠ (✻) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (✻) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDEES PAR LÉ FABRICANT.

1.RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

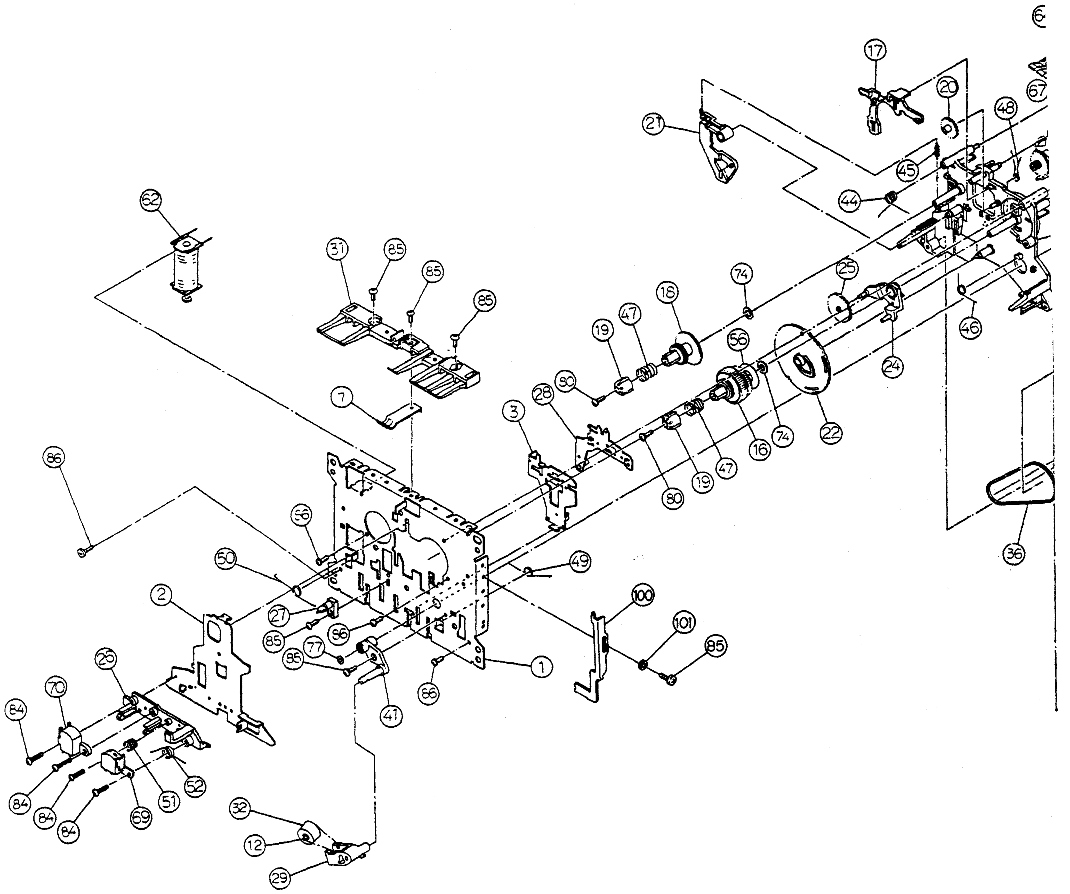
Ref.No.	Part No.	Description
1	BB-401096M	MECHA GAK-5PB-2 [TAPE-1.HX-M630W]
2	BB-403466M	MECHA GAK3603D [TAPE-2,HX-M630W]
3	BB-405194J	MECHA GAS-3601D [TAPE-2,HX-M830M]
4	BB-400945J	MECHA GAS3602D [TAPE-1,HX-M830W]
5	BM-729992J	MOTOR EG-530KD-2B
6	BM-729993J	MOTOR EG-530YD-2B
7	ED-394723J	D LED GL3HY44 YELLOW
8	ED-382365J	D LED SLR-34VC3F RED [HX-M830W]
9	ED-307572	D SILICON H 1SS131
10	ED-370990	D SILICON 1SR35-100AHS F10
11	ED-381585J	D ZENER H HZS11B1J F05
12	ED-391005J	D ZENER H HZS12B1
13	ED-391103J	D ZENER H HZS12B2
14	ED-396065J	D ZENER H HZS12C1
15	ED-391003J	D ZENER H HZS4C3
16	ED-387919J	D ZENER H HZS6A1L F05
17	ED-372680	D ZENER H HZS6B3L F05
18	ED-400171J	D ZENER H HZS6C2L F05
19	ED-388368J	D ZENER H HZS9B3L F05
20	ED-346525	D ZENER H HZ6A3L
21	EI-373980	IC BA15218N
22	EI-394572J	IC CXA1115BP
23	EI-394573J	IC CXA1331S
24	EI-394574J	IC LA2000
25	EI-337008	IC LC7800
26	EI-394569J	IC M66312P
27	EI-373383	IC UPC1297CA
28	EI-401092J	IC UPD75106CW FXA2DK1-185
29	EI-401057J	IC UPD75112CW FXB2DK1-120
30	EI-719635	OSC CE KBR-4.19M 4.19MHZ
31	ER-345751	R FUSE H S10 ERD2FC 1/4W 15R0G
32	ER-200926	R FUSE H S10 ERD2FC 1/4W 27R0G
33	ER-318647	R FUSE H S10 ERD2FC 1/4W 4R7J
34	ES-732430M	SW LEAF LSA-1114F
35	ES-732429M	SW LEAF LSA-1146-2AU
36	ES-390621J	SW SLIDE SSSF 01-03N [DOLBY]
37	ES-394818J	SW TACT SOR-123HS T05 [STOP]
38	ET-732427M	DETECTOR NJL5165K
39	ET-369248	TR DTA114YS
40	ET-373382	TR DTA143ZS
41	ET-360399	TR DTC114TS
42	ET-354365	TR DTC114YS
43	ET-373485	TR DTC123JS
44	ET-373392	TR DTC124XS
45	ET-354364	TR DTC143TS
46	ET-373391	TR DTC143ZS
47	ET-354414	TR DTC144ES
48	ET-394570J	TR 2SA1038 S T05
49	ET-749377	TR 2SA1048 GR
50	ET-394642J	TR 2SC1840 F,E T05
51	ET-394571J	TR 2SC2389 S,E T05
52	ET-749375	TR 2SC2458 GR
53	ET-394643J	TR 2SC3113 A,B T05
54	ET-400741J	TR 2SC3708 T T05
55	ET-366581	TR 2SD1762 E,F
56	ET-396072J	TR 2SD2159 V,W
57	EW-390605J	WIRE ASSY T2127 (B) 15P
58	HR-732436J	HEAD RP BLK HX-M800W
59	HR-732431M	HEAD RP MS15R-AA2N4
60	MB-732415M	CLUTCH BELT (C)
61	MB-732454J	CLUTCH BELT (F)
62	MB-732416M	DRIVE BELT
63	MB-732574J	DRIVE BELT
64	MP-732411M	PINCH ROLLER
65	MP-732450J	PINCH ROLLER (L) ASSY
66	MP-732449J	PINCH ROLLER (R) ASSY

2. MECHA BLOCK

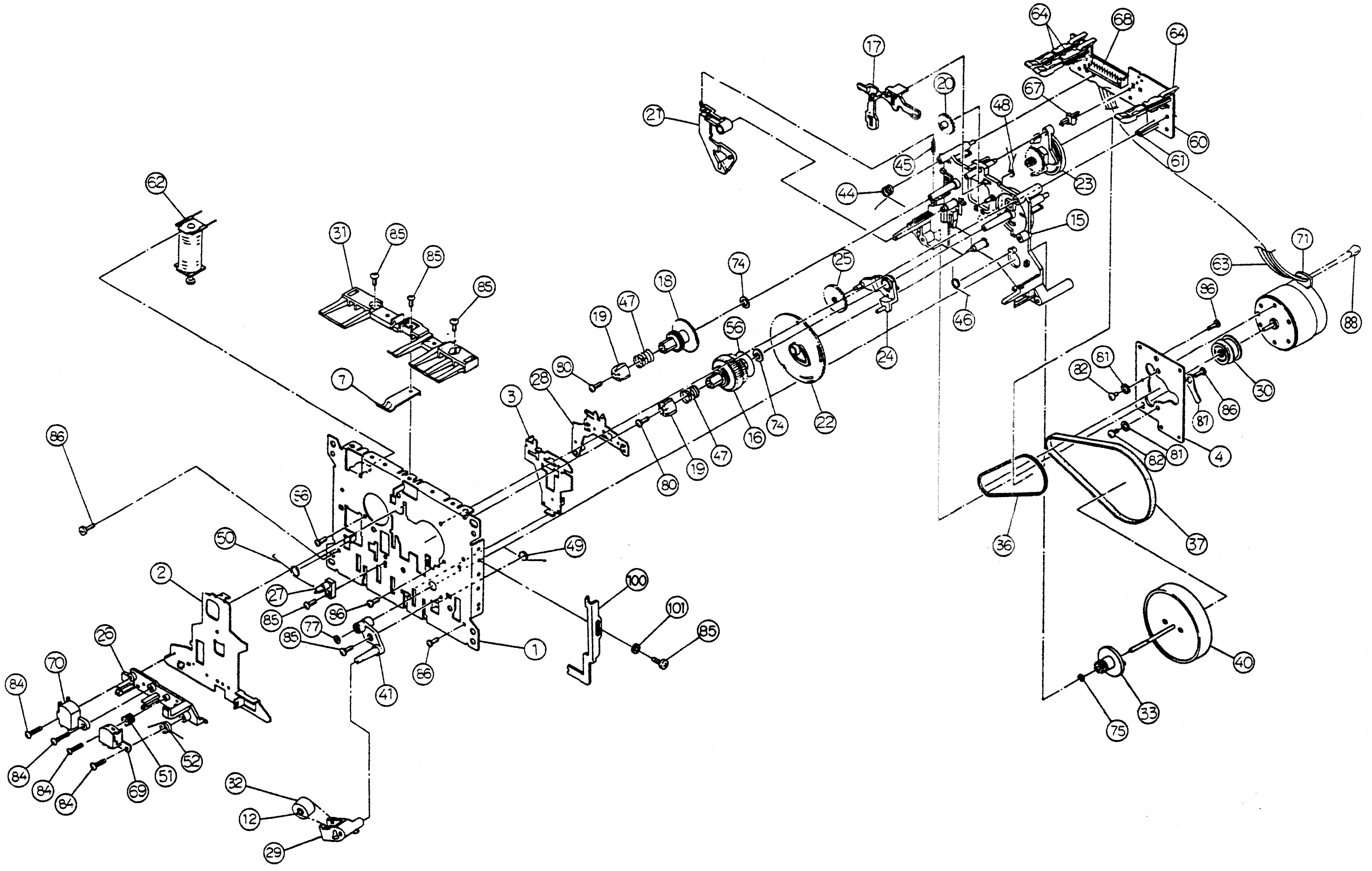
Ref.No.	Part No.	Description
7	ZG-732571M	PACK SPRING (M)
12	MS-732393M	P ROLLER SHAFT
16	MT-732394J	REEL ASSY (T)
17	ML-732395M	BRAKE ARM
18	MT-732396M	REEL (S)
19	MT-732397J	REEL CAP (B)
20	MZ-732398M	FF GEAR
22	MZ-732401J	PLAY CAM GEAR
23	MZ-732402J	CLUTCH ASSY
25	MZ-732404M	PLAY GEAR
26	HZ-732405J	HEAD BASE
30	MR-732409J	MOTOR PULLEY (C)
32	MP-732411J	PINCH ROLLER
33	MZ-732412M	FLYWHEEL GEAR
36	MB-732415M	CLUTCH BELT (C)
37	MB-732416M	DRIVE BELT
40	MI-732417M	FLYWHEEL
41	MV-732418J	HOUSING ASSY
44	ZG-735419J	BRAKE ARM SPRING
46	ZG-735420J	PLAY ARM SPRING
47	ZG-732421M	REEL SPRING
48	ZG-735422J	CLUTCH ARM SPRING
51	ZG-726027J	SP HEAD (RP)
52	ZG-732425M	P ROLLER SPRING
56	MZ-732426M	REFLECT SEAL
61	ET-732427M	DETECTOR NJL5165K
62	EP-732428M	SOLENOID ASSY
64	ES-732429M	SW LEAF LSA-1146-2AU
67	ES-732430M	SW LEAF LSA-1114F
69	HR-732431M	HEAD RP MS15R-AA2N4
70	HZ-732414M	DUMMY E HEAD LE100-C1
71	BM-729992J	MOTOR EG-530KD-2B
75	ZW-726629J	PSW21X040X025
77	ZW-725589J	PSW16X060X050
80	ZS-732434M	SCREW 1.7X6SPL
85	ZS-725379J	T2BID20X04

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

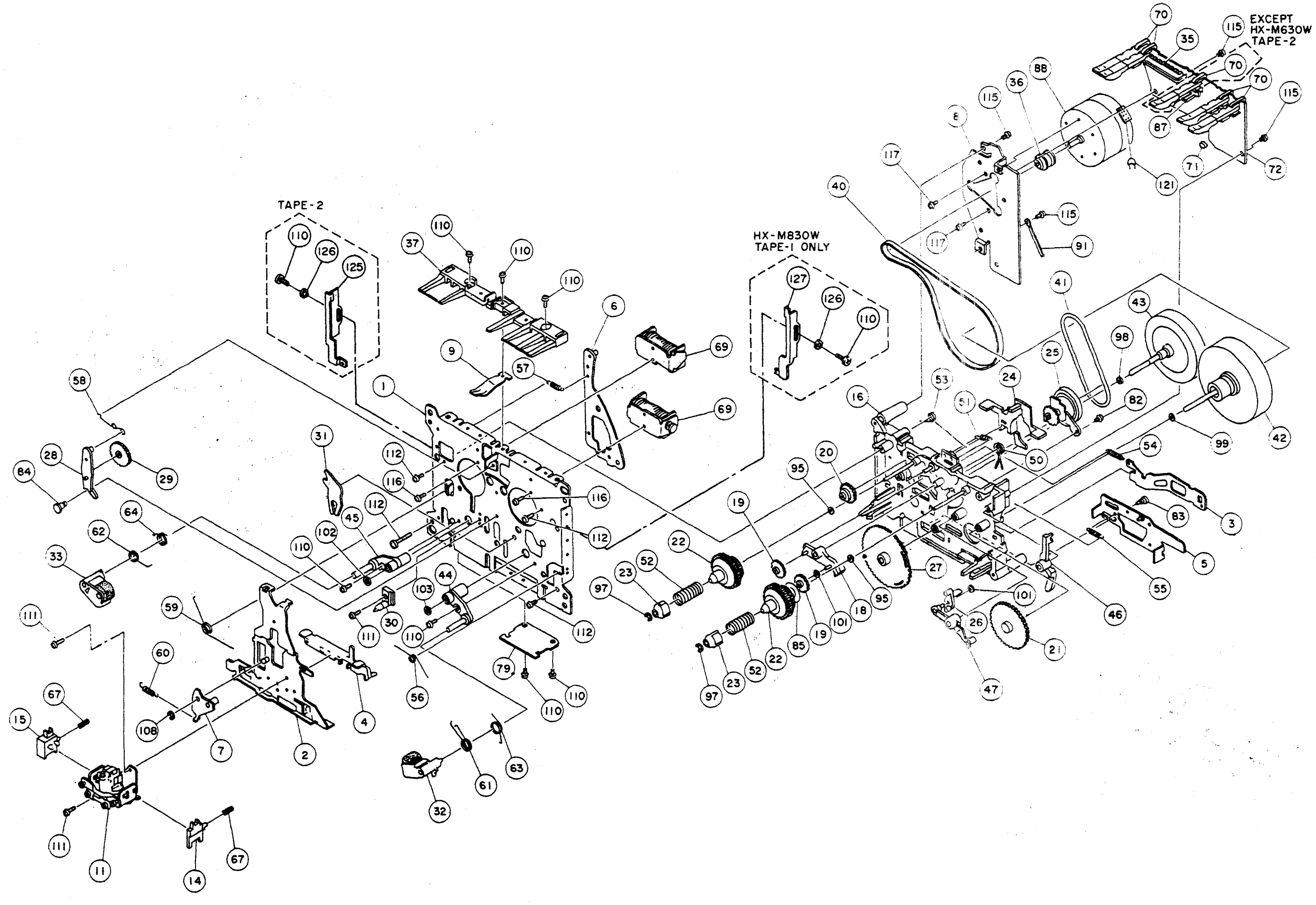
MECHA BLOCK



MECHA BLOCK



MECHA BLOCK (REVERSE)


TAPE-2
HX-M830W
TAPE-1 ONLY
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HX-M630W
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3. MECHA BLOCK (REVERSE)

Ref.No.	Part No.	Description
9	ZG-732571M	PACK SPRING (M)
11	HR-732436J	HEAD RP BLK HX-M800W
14	MS-732437J	TAPE GUIDE (R)
15	MS-732438J	TAPE GUIDE (L)
19	MZ-732439J	FR GEAR
20	MZ-732440J	REW GEAR
21	MZ-732441J	FR CAM GEAR
22	MT-732442J	REEL ASSY (G)
23	MT-732573J	REEL CAP (C)
24	ML-732444J	BRAKE ARM (B)
25	MZ-732445J	CLUTCH (B) ASSY
27	MZ-732446J	PL CAM GEAR (B)
29	MZ-732447J	PLAY GEAR
30	MS-732448J	CASSETTE GUIDE
32	MP-732449J	PINCH ROLLER (R) ASSY
33	MP-732450J	PINCH ROLLER (L) ASSY
36	MR-732452J	MOTOR PULLEY (F)
40	MB-732574J	DRIVE BELT
41	MB-732454J	CLUTCH BELT (F)
42	MI-732575J	FLYWHEEL (A) ASSY
43	MI-732576J	FLYWHEEL (B) ASSY
44	MV-732457J	HOUSING (R)
45	MV-732458J	HOUSING (L)
50	ZG-732459J	SP FR ARM (G)
51	ZG-732460J	SP FR ARM (B)
52	ZG-732461J	SP REEL (F)
53	ZG-732462J	SP BRAKE
56	ZG-732463J	SP FR SHIFT
58	ZG-732464J	SP PLAY ARM
59	ZG-732465J	SP HEAD CHASSIS (B)
61	ZG-732466J	SP P-ROLLER (RA)
62	ZG-732467J	SP P-ROLLER (LA)
63	ZG-732468J	SP P-ROLLER ARM (RB)
64	ZG-732469J	SP P-ROLLER ARM (LB)
69	EP-732470J	SOLENOID ASSY (B)
70	ES-732429M	SW LEAF LSA-1146-2AU
71	ET-732427M	DETECTOR NJL5165K
85	MZ-732471J	REFRECT SEAL
88	BM-729993J	MOTOR EG-530YD-2B
95	ZW-726629J	PSW21X040X025
97	ZW-715984	PW16X035X050PSL
101	ZW-716206	PW17X035X025PSL
102	ZW-749818	WASHER 1.8X5.0X0.5NYL
103	ZW-749819	WASHER 2.1X7.0X0.5NYL
110	ZS-725379J	T2BID20X04
111	ZS-726632J	SCREW 20X05

NOTE:

Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

4. P.C BOARD

Ref.No.	Part No.	Description
1A	BA-T2131A020A	PC DECK-A BLK HX-M630W
1B	BA-T2132A020A	PC DECK-B BLK HX-M830W
2A	BA-T2131A030A	PC OPERATION BLK HX-M630W
2B	BA-T2131A030B	PC OPERATION BLK HX-M830W

5. DECK-A F

Ref.No.	Par
D201	ED-
D202	ED-
D301	ED-
D401	ED-
D441	ED-
D442	ED-
D471	ED-
D472	ED-
D501	ED-
D502	ED-
D503	ED-
D601	ED-
D602	ED-
D603	ED-
D701	ED-
D702	ED-
D703	ED-
D704	ED-
D705	ED-
D706	ED-
D707	ED-
D708	ED-
D709	ED-
D710	ED-
D711	ED-
D712	ED-
FL141	EO-
FL171	EO-
FL241	EO-
FL271	EO-
FR301	ER-
IB501	EH-
IB502	EH-
IB503	EH-
IC101	EI-3
IC102	EI-3
IC201	EI-3
IC301	EI-3
IC501	EI-4
L201	EO-
L241	EO-
L242	EO-
L271	EO-
L272	EO-
T201	EO-
TR101	ET-
TR102	ET-
TR103	ET-
TR104	ET-
TR105	ET-
TR106	ET-
TR107	ET-
TR108	ET-
TR141	ET-
TR142	ET-
TR143	ET-
TR144	ET-
TR145	ET-
TR146	ET-
TR147	ET-
TR171	ET-
TR172	ET-
TR173	ET-
TR174	ET-
TR175	ET-
TR176	ET-
TR177	ET-
TR201	ET-
TR202	ET-
TR203	ET-
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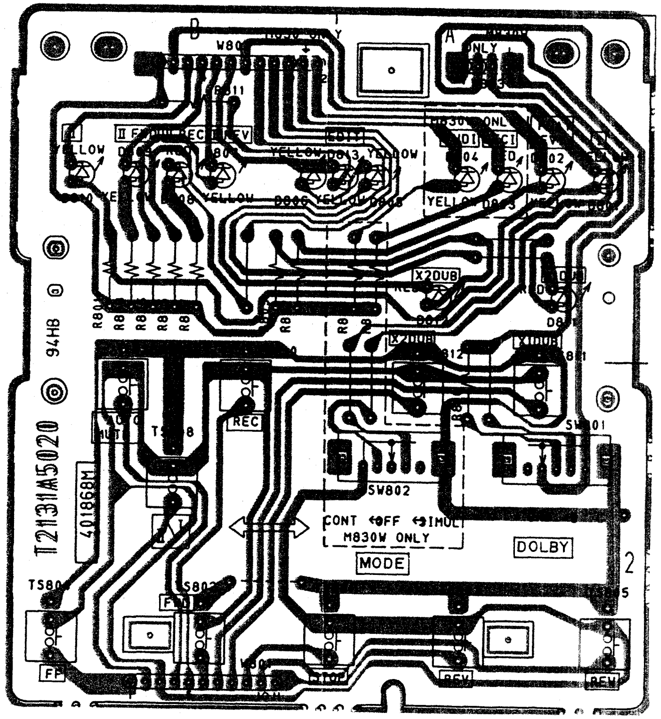
TR210	ET-
TR211	ET-
TR241	ET-

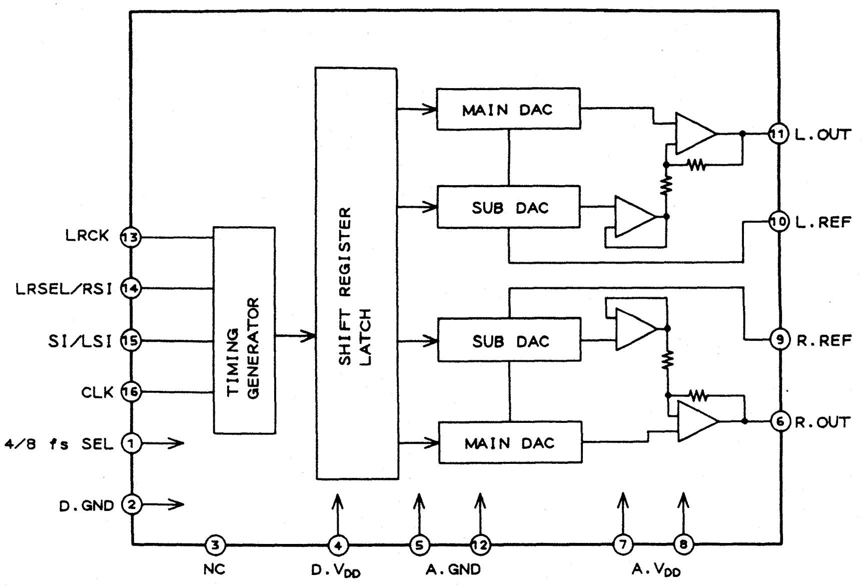

DOLBY
MODE
SW802
CONT OFF SIMUL
M830W ONLY
REC
X2DUB
T2131A5020
401868M
94HB
TS801
FF
STOP
REW
REV
SW801

OPERATION PCB T2123A5020

PD0052 (Digital Audio Interface Receiver)

PIN NO.	SYMBOL	I/O	DESCRIPTION
1	IN 1	I	Digital Audio Interface signal input.
2	IN 2	I	
3	IN 3	I	
4	S 1	I	Input select 1.
5	S 2	I	Input select 2.
6	OUT	O	Data output.
7	$\overline{\text{TEST}}$	I	TEST MODE input.
8	$\overline{\text{RESET}}$	I	Power "ON" Reset input.
9	VCOINH	I	VCO OSC Stop Control signal input.
10	VSS	-	GND
11	PCVS	I	External Resistor Connection Terminal for VCO.
12	PC OUT	O	Phase comperator output.
13	R	-	External Resistor Connection Terminal for VCO.
14	VCO IN	I	Control voltage input.
15	VDD 1	-	+B (+5 V)
16	VCO OUT	O	VCO Output (384 fs)
17	VSS 1	-	GND
18	CA	-	External Capacitor Connection Terminal for VCO.
19	CB	-	
20	MODE	-	GND
21	BCK	O	Bit clock output.
22	DATA	O	Data output.
23	LRCK	O	Data output. (H=L ch, L=R ch)
24	COPY	O	Copy inhibit information output.
25	EMPH	O	H: EMPHASIS
26	ERR	O	H: Parity Error, L= NO ERROR
27	48 K	O	Sampling Frequency data output. L=active
28	44.1 K	O	
29	32 K	O	
30	VDD	-	+B (+5 V)

µPD6376CX (16 Bit D/A Convertor)


MAIN DAC
SUB DAC
SUB DAC
MAIN DAC
TIMING GENERATOR
SHIFT REGISTER LATCH
LRCK 13
LRSEL/RSI 14
SI/LSI 15
CLK 16
4/8 fs SEL 1
D.GND 2
3 NC
4 D.VDD
5
12 A.GND
7
8 A.VDD
11 L.OUT
10 L.REF
9 R.REF
6 R.OUT

3. MECHA BLOCK (REVERSE)

Ref.No.	Part No.	Description
9	ZG-732571M	PACK SPRING (M)
11	HR-732436J	HEAD RP BLK HX-M800W
14	MS-732437J	TAPE GUIDE (R)
15	MS-732438J	TAPE GUIDE (L)
19	MZ-732439J	FR GEAR
20	MZ-732440J	REW GEAR
21	MZ-732441J	FR CAM GEAR
22	MT-732442J	REEL ASSY (G)
23	MT-732573J	REEL CAP (C)
24	ML-732444J	BRAKE ARM (B)
25	MZ-732445J	CLUTCH (B) ASSY
27	MZ-732446J	PL CAM GEAR (B)
29	MZ-732447J	PLAY GEAR
30	MS-732448J	CASSETTE GUIDE
32	MP-732449J	PINCH ROLLER (R) ASSY
33	MP-732450J	PINCH ROLLER (L) ASSY
36	MR-732452J	MOTOR PULLEY (F)
40	MB-732574J	DRIVE BELT
41	MB-732454J	CLUTCH BELT (F)
42	MI-732575J	FLYWHEEL (A) ASSY
43	MI-732576J	FLYWHEEL (B) ASSY
44	MV-732457J	HOUSING (R)
45	MV-732458J	HOUSING (L)
50	ZG-732459J	SP FR ARM (G)
51	ZG-732460J	SP FR ARM (B)
52	ZG-732461J	SP REEL (F)
53	ZG-732462J	SP BRAKE
56	ZG-732463J	SP FR SHIFT
58	ZG-732464J	SP PLAY ARM
59	ZG-732465J	SP HEAD CHASSIS (B)
61	ZG-732466J	SP P-ROLLER (RA)
62	ZG-732467J	SP P-ROLLER (LA)
63	ZG-732468J	SP P-ROLLER ARM (RB)
64	ZG-732469J	SP P-ROLLER ARM (LB)
69	EP-732470J	SOLENOID ASSY (B)
70	ES-732429M	SW LEAF LSA-1146-2AU
71	ET-732427M	DETECTOR NJL5165K
85	MZ-732471J	REFRECT SEAL
88	BM-729993J	MOTOR EG-530YD-2B
95	ZW-726629J	PSW21X040X025
97	ZW-715984	PW16X035X050PSL
101	ZW-716206	PW17X035X025PSL
102	ZW-749818	WASHER 1.8X5.0X0.5NYL
103	ZW-749819	WASHER 2.1X7.0X0.5NYL
110	ZS-725379J	T2BID20X04
111	ZS-726632J	SCREW 20X05

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

4. P.C BOARD

Ref.No.	Part No.	Description
1A	BA-T2131A020A	PC DECK-A BLK HX-M630W
1B	BA-T2132A020A	PC DECK-B BLK HX-M830W
2A	BA-T2131A030A	PC OPERATION BLK HX-M630W
2B	BA-T2131A030B	PC OPERATION BLK HX-M830W

5. DECK-A P.C BOARD (HX-M630W)

Ref.No.	Part No.	Description
D201	ED-391003J	D ZENER H HZS4C3
D202	ED-388368J	D ZENER H HZS9B3L F05
D301	ED-381585J	D ZENER H HZS11B1J F05
D401	ED-307572	D SILICON H 1SS131
D441	ED-307572	D SILICON H 1SS131
D442	ED-307572	D SILICON H 1SS131
D471	ED-307572	D SILICON H 1SS131
D472	ED-307572	D SILICON H 1SS131
D501	ED-307572	D SILICON H 1SS131
D502	ED-307572	D SILICON H 1SS131
D503	ED-307572	D SILICON H 1SS131
D601	ED-307572	D SILICON H 1SS131
D602	ED-307572	D SILICON H 1SS131
D603	ED-307572	D SILICON H 1SS131
D701	ED-370990	D SILICON 1SR35-100AHS F10
D702	ED-370990	D SILICON 1SR35-100AHS F10
D703	ED-370990	D SILICON 1SR35-100AHS F10
D704	ED-370990	D SILICON 1SR35-100AHS F10
D705	ED-370990	D SILICON 1SR35-100AHS F10
D706	ED-370990	D SILICON 1SR35-100AHS F10
D707	ED-370990	D SILICON 1SR35-100AHS F10
D708	ED-370990	D SILICON 1SR35-100AHS F10
D709	ED-391103J	D ZENER H HZS12B2
D710	ED-372680	D ZENER H HZS6B3L F05
D711	ED-387919J	D ZENER H HZS6A1L F05
D712	ED-391103J	D ZENER H HZS12B2
FL141	EO-395018J	COIL TUN 1 0014-908-0-00
FL171	EO-395018J	COIL TUN 1 0014-908-0-00
FL241	EO-395018J	COIL TUN 1 0014-908-0-00
FL271	EO-395018J	COIL TUN 1 0014-908-0-00
FR301	ER-200926	R FUSE H S10 ERD2FC 1/4W 27R0G
IB501	EH-397651J	COMP R RGLE11A1227
IB502	EH-397652J	COMP R RGLE12A1228
IB503	EH-394563J	COMP R RGLE3X 332J
IC101	EI-394572J	IC CXA1115BP
IC102	EI-394574J	IC LA2000
IC201	EI-373980	IC BA15218N
IC301	EI-394573J	IC CXA1331S
IC501	EI-401092J	IC UPD75106CW FXA2DK1-185
L201	EO-389412J	COIL FIX 1 LAV35VB T05 101K
L241	EO-394589J	COIL FIX 1 RCP095 822J
L242	EO-393645J	COIL FIX 1 RCP095 392J
L271	EO-394589J	COIL FIX 1 RCP095 822J
L272	EO-393645J	COIL FIX 1 RCP095 392J
T201	EO-395017J	COIL OSC 1 0015-905-0-00
TR101	ET-394570J	TR 2SA1038 S T05
TR102	ET-354414	TR DTC144ES
TR103	ET-373391	TR DTC143ZS
TR104	ET-354414	TR DTC144ES
TR105	ET-354365	TR DTC114YS
TR106	ET-354365	TR DTC114YS
TR107	ET-354365	TR DTC114YS
TR108	ET-354414	TR DTC144ES
TR141	ET-749375	TR 2SC2458 GR
TR142	ET-354364	TR DTC143TS
TR143	ET-749375	TR 2SC2458 GR
TR144	ET-354364	TR DTC143TS
TR145	ET-394571J	TR 2SC2389 S,E T05
TR146	ET-394571J	TR 2SC2389 S,E T05
TR147	ET-354364	TR DTC143TS
TR171	ET-749375	TR 2SC2458 GR
TR172	ET-354364	TR DTC143TS
TR173	ET-749375	TR 2SC2458 GR
TR174	ET-354364	TR DTC143TS
TR175	ET-394571J	TR 2SC2389 S,E T05
TR176	ET-394571J	TR 2SC2389 S,E T05
TR177	ET-354364	TR DTC143TS
TR201	ET-373391	TR DTC143ZS
TR202	ET-400741J	TR 2SC3708 T T05
TR203	ET-400741J	TR 2SC3708 T T05
TR204	ET-366581	TR 2SD1762 E,F
TR205	ET-749375	TR 2SC2458 GR
TR206	ET-749375	TR 2SC2458 GR
TR207	ET-749375	TR 2SC2458 GR
TR208	ET-354414	TR DTC144ES
TR209	ET-354414	TR DTC144ES
TR210	ET-373391	TR DTC143ZS
TR211	ET-354364	TR DTC143TS
TR241	ET-749375	TR 2SC2458 GR

Ref.No.	Part No.	Description
TR242	ET-354364	TR DTC143TS
TR243	ET-354364	TR DTC143TS
TR244	ET-354364	TR DTC143TS
TR271	ET-749375	TR 2SC2458 GR
TR272	ET-354364	TR DTC143TS
TR273	ET-354364	TR DTC143TS
TR274	ET-354364	TR DTC143TS
TR301	ET-354365	TR DTC114YS
TR441	ET-749375	TR 2SC2458 GR
TR442	ET-749375	TR 2SC2458 GR
TR443	ET-749375	TR 2SC2458 GR
TR444	ET-749375	TR 2SC2458 GR
TR445	ET-749375	TR 2SC2458 GR
TR471	ET-749375	TR 2SC2458 GR
TR472	ET-749375	TR 2SC2458 GR
TR473	ET-749375	TR 2SC2458 GR
TR474	ET-749375	TR 2SC2458 GR
TR475	ET-749375	TR 2SC2458 GR
TR501	ET-373392	TR DTC124XS
TR502	ET-373392	TR DTC124XS
TR503	ET-373382	TR DTA143ZS
TR504	ET-369248	TR DTA114YS
TR505	ET-354414	TR DTC144ES
TR506	ET-373485	TR DTC123JS
TR507	ET-373485	TR DTC123JS
TR508	ET-373485	TR DTC123JS
TR509	ET-373485	TR DTC123JS
TR510	ET-749375	TR 2SC2458 GR
TR511	ET-373485	TR DTC123JS
TR512	ET-373485	TR DTC123JS
TR513	ET-373485	TR DTC123JS
TR514	ET-373485	TR DTC123JS
TR601	ET-396072J	TR 2SD2159 V,W
TR602	ET-396072J	TR 2SD2159 V,W
TR603	ET-396072J	TR 2SD2159 V,W
TR604	ET-396072J	TR 2SD2159 V,W
TR605	ET-373382	TR DTA143ZS
TR606	ET-749377	TR 2SA1048 GR
TR607	ET-749377	TR 2SA1048 GR
TR608	ET-749375	TR 2SC2458 GR
TR609	ET-749375	TR 2SC2458 GR
TR701	ET-366581	TR 2SD1762 E,F
TR702	ET-749375	TR 2SC2458 GR
TR703	ET-366581	TR 2SD1762 E,F
TR704	ET-749375	TR 2SC2458 GR
TR705	ET-366581	TR 2SD1762 E,F
TR706	ET-749375	TR 2SC2458 GR
TR707	ET-749375	TR 2SC2458 GR
VR140	EV-356577	R S-FIX H RH0615C 0.10W 103
VR141	EV-362115	R S-FIX H RH0615C 0.10W 153
VR170	EV-356577	R S-FIX H RH0615C 0.10W 103
VR171	EV-362115	R S-FIX H RH0615C 0.10W 153
VR201	EV-356583	R S-FIX H RH0615C 0.10W 332
VR241	EV-356576	R S-FIX H RH0615C 0.10W 472
VR251	EV-341236	R S-FIX H TM8KV2-1S 0.50W303
VR271	EV-356576	R S-FIX H RH0615C 0.10W 472
VR281	EV-341236	R S-FIX H TM8KV2-1S 0.50W303
VR601	EV-394561J	R S-FIX H V8K4-11(1S) 0.10W102
VR602	EV-367524	R S-FIX H V8K4-11(1S) 0.10W501
VR603	EV-355380	R S-FIX H V8K4-11(1S) 0.10W202
VR604	EV-394561J	R S-FIX H V8K4-11(1S) 0.10W102
X501	EI-719635	OSC CE KBR-4.19M 4.19MHZ

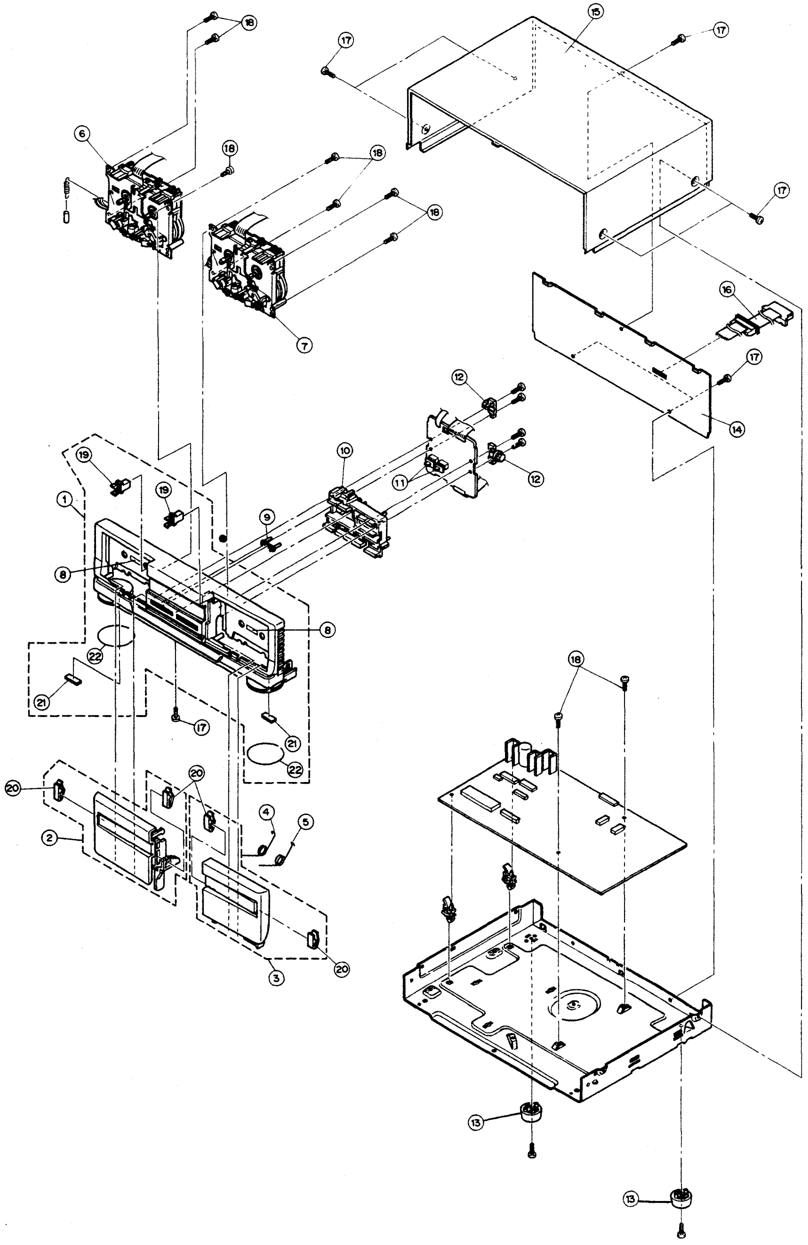
6. DECK-B P.C BOARD (HX-M830W)

Ref.No.	Part No.	Description
D201	ED-381585J	D ZENER H HZS11B1J F05
D301	ED-388368J	D ZENER H HZS9B3L F05
D401	ED-388368J	D ZENER H HZS9B3L F05
D501	ED-391003J	D ZENER H HZS4C3
D551	ED-391003J	D ZENER H HZS4C3
D601	ED-307572	D SILICON H 1SS131
D602	ED-307572	D SILICON H 1SS131
D603	ED-307572	D SILICON H 1SS131
D604	ED-307572	D SILICON H 1SS131
D651	ED-307572	D SILICON H 1SS131
D701	ED-370990	D SILICON 1SR35-100AHS F10
D702	ED-370990	D SILICON 1SR35-100AHS F10
D703	ED-370990	D SILICON 1SR35-100AHS F10
D704	ED-370990	D SILICON 1SR35-100AHS F10
D705	ED-391005J	D ZENER H HZS12B1
D706	ED-396065J	D ZENER H HZS12C1
D707	ED-400171J	D ZENER H HZS6C2L F05
D708	ED-346525	D ZENER H HZ6A3L
D709	ED-370990	D SILICON 1SR35-100AHS F10
D710	ED-370990	D SILICON 1SR35-100AHS F10
D711	ED-370990	D SILICON 1SR35-100AHS F10
D712	ED-370990	D SILICON 1SR35-100AHS F10
D713	ED-307572	D SILICON H 1SS131
D714	ED-307572	D SILICON H 1SS131
D715	ED-307572	D SILICON H 1SS131
D716	ED-307572	D SILICON H 1SS131
D717	ED-307572	D SILICON H 1SS131
D718	ED-307572	D SILICON H 1SS131
D719	ED-307572	D SILICON H 1SS131
D721	ED-370990	D SILICON 1SR35-100AHS F10
D722	ED-370990	D SILICON 1SR35-100AHS F10
FL101	EO-395018J	COIL TUN 1 0014-908-0-00
FL151	EO-395018J	COIL TUN 1 0014-908-0-00
FL301	EO-395018J	COIL TUN 1 0014-908-0-00
FL351	EO-395018J	COIL TUN 1 0014-908-0-00
FL401	EO-395018J	COIL TUN 1 0014-908-0-00
FL451	EO-395018J	COIL TUN 1 0014-908-0-00
FR281	ER-200926	R FUSE H S10 ERD2FC 1/4W 27R0G
FR701	ER-345751	R FUSE H S10 ERD2FC 1/4W 15R0G
FR901	ER-318647	R FUSE H S10 ERD2FC 1/4W 4R7J
IB701	EH-383120J	COMP R RGLE11X 473J
IB702	EH-383120J	COMP R RGLE11X 473J
IB703	EH-394596J	COMP R RGLE4X 332J
IB704	EH-397650J	COMP R RGLE12X 472J
IC101	EI-394572J	IC CXA1115BP
IC201	EI-394573J	IC CXA1331S
IC301	EI-373980	IC BA15218N
IC401	EI-373980	IC BA15218N
IC681	EI-394574J	IC LA2000
IC701	EI-401057J	IC UPD75112CW FXB2DK1-120
IC702	EI-337008	IC LC7800
IC703	EI-394569J	IC M66312P
IC901	EI-373383	IC UPC1297CA
IC951	EI-373383	IC UPC1297CA
L301	EO-394589J	COIL FIX 1 RCP095 822J
L351	EO-394589J	COIL FIX 1 RCP095 822J
L401	EO-394589J	COIL FIX 1 RCP095 822J
L402	EO-393645J	COIL FIX 1 RCP095 392J
L451	EO-394589J	COIL FIX 1 RCP095 822J
L452	EO-393645J	COIL FIX 1 RCP095 392J
L501	EO-389412J	COIL FIX 1 LAV35VB T05 101K
L551	EO-389412J	COIL FIX 1 LAV35VB T05 101K
T501	EO-395017J	COIL OSC 1 0015-905-0-00
T551	EO-395017J	COIL OSC 1 0015-905-0-00
T901	EO-401093J	COIL OSC 1 T2132(HX) 100KHZ
T902	EO-401093J	COIL OSC 1 T2132(HX) 100KHZ
T951	EO-401093J	COIL OSC 1 T2132(HX) 100KHZ
T952	EO-401093J	COIL OSC 1 T2132(HX) 100KHZ
TR101	ET-394571J	TR 2SC2389 S,E T05
TR102	ET-394571J	TR 2SC2389 S,E T05
TR103	ET-749375	TR 2SC2458 GR
TR104	ET-354364	TR DTC143TS
TR105	ET-394571J	TR 2SC2389 S,E T05
TR106	ET-394571J	TR 2SC2389 S,E T05
TR107	ET-749375	TR 2SC2458 GR
TR108	ET-354364	TR DTC143TS
TR109	ET-354364	TR DTC143TS
TR151	ET-394571J	TR 2SC2389 S,E T05
TR152	ET-394571J	TR 2SC2389 S,E T05
TR153	ET-749375	TR 2SC2458 GR
TR154	ET-354364	TR DTC143TS
TR155	ET-394571J	TR 2SC2389 S,E T05
TR156	ET-394571J	TR 2SC2389 S,E T05
TR157	ET-749375	TR 2SC2458 GR
TR158	ET-354364	TR DTC143TS
TR159	ET-354364	TR DTC143TS
TR181	ET-394570J	TR 2SA1038 S T05
TR182	ET-354414	TR DTC144ES
TR183	ET-373391	TR DTC143ZS
TR184	ET-394570J	TR 2SA1038 S T05
TR185	ET-354414	TR DTC144ES
TR186	ET-373391	TR DTC143ZS
TR187	ET-354414	TR DTC144ES
TR188	ET-354414	TR DTC144ES
TR189	ET-354414	TR DTC144ES
TR190	ET-373391	TR DTC143ZS
TR191	ET-354365	TR DTC114YS
TR201	ET-749375	TR 2SC2458 GR
TR202	ET-749375	TR 2SC2458 GR
TR251	ET-749375	TR 2SC2458 GR
TR252	ET-749375	TR 2SC2458 GR
TR281	ET-354365	TR DTC114YS
TR301	ET-749375	TR 2SC2458 GR
TR302	ET-354364	TR DTC143TS
TR303	ET-354364	TR DTC143TS
TR304	ET-354364	TR DTC143TS
TR351	ET-749375	TR 2SC2458 GR
TR352	ET-354364	TR DTC143TS
TR353	ET-354364	TR DTC143TS
TR354	ET-354364	TR DTC143TS
TR401	ET-749375	TR 2SC2458 GR
TR402	ET-354364	TR DTC143TS
TR403	ET-354364	TR DTC143TS
TR404	ET-354364	TR DTC143TS
TR405	ET-354364	TR DTC143TS
TR406	ET-354364	TR DTC143TS
TR451	ET-749375	TR 2SC2458 GR
TR452	ET-354364	TR DTC143TS
TR453	ET-354364	TR DTC143TS
TR454	ET-354364	TR DTC143TS
TR455	ET-354364	TR DTC143TS
TR456	ET-354364	TR DTC143TS
TR501	ET-354414	TR DTC144ES
TR502	ET-354414	TR DTC144ES
TR503	ET-373391	TR DTC143ZS
TR504	ET-394643J	TR 2SC3113 A,B T05
TR505	ET-366581	TR 2SD1762 E,F
TR506	ET-749375	TR 2SC2458 GR
TR507	ET-394642J	TR 2SC1840 F,E T05
TR508	ET-354364	TR DTC143TS
TR509	ET-354364	TR DTC143TS
TR510	ET-400741J	TR 2SC3708 T T05
TR511	ET-400741J	TR 2SC3708 T T05
TR551	ET-354414	TR DTC144ES
TR552	ET-354414	TR DTC144ES
TR553	ET-373391	TR DTC143ZS
TR554	ET-394643J	TR 2SC3113 A,B T05
TR555	ET-366581	TR 2SD1762 E,F
TR556	ET-749375	TR 2SC2458 GR
TR557	ET-394642J	TR 2SC1840 F,E T05
TR558	ET-354364	TR DTC143TS
TR559	ET-354364	TR DTC143TS
TR560	ET-400741J	TR 2SC3708 T T05
TR561	ET-400741J	TR 2SC3708 T T05
TR601	ET-749375	TR 2SC2458 GR
TR602	ET-749375	TR 2SC2458 GR
TR603	ET-749375	TR 2SC2458 GR
TR604	ET-749375	TR 2SC2458 GR
TR651	ET-749375	TR 2SC2458 GR
TR652	ET-749375	TR 2SC2458 GR
TR701	ET-749375	TR 2SC2458 GR
TR702	ET-366365	TR 2SB1185 E,F
TR703	ET-749375	TR 2SC2458 GR
TR704	ET-366581	TR 2SD1762 E,F
TR705	ET-749375	TR 2SC2458 GR
TR706	ET-749375	TR 2SC2458 GR
TR707	ET-366581	TR 2SD1762 E,F
TR708	ET-354414	TR DTC144ES
TR709	ET-373392	TR DTC124XS
TR710	ET-373392	TR DTC124XS
TR711	ET-749375	TR 2SC2458 GR
TR712	ET-749375	TR 2SC2458 GR
TR713	ET-373382	TR DTA143ZS
TR714	ET-396072J	TR 2SD2159 V,W
TR715	ET-396072J	TR 2SD2159 V,W
TR716	ET-396072J	TR 2SD2159 V,W
TR717	ET-396072J	TR 2SD2159 V,W
TR718	ET-396072J	TR 2SD2159 V,W
TR719	ET-749377	TR 2SA1048 GR
TR720	ET-749377	TR 2SA1048 GR
TR721	ET-369248	TR DTA114YS
TR722	ET-373382	TR DTA143ZS
TR723	ET-373382	TR DTA143ZS
TR724	ET-360399	TR DTC114TS
TR725	ET-360399	TR DTC114TS
TR726	ET-360399	TR DTC114TS
TR727	ET-373485	TR DTC123JS
TR728	ET-373485	TR DTC123JS
TR729	ET-749375	TR 2SC2458 GR
VR101	EV-362115	R S-FIX H RH0615C 0.10W 153
VR102	EV-362115	R S-FIX H RH0615C 0.10W 153
VR151	EV-362115	R S-FIX H RH0615C 0.10W 153
VR152	EV-362115	R S-FIX H RH0615C 0.10W 153
VR301	EV-356576	R S-FIX H RH0615C 0.10W 472
VR351	EV-356576	R S-FIX H RH0615C 0.10W 472
VR401	EV-356576	R S-FIX H RH0615C 0.10W 472
VR451	EV-356576	R S-FIX H RH0615C 0.10W 472
VR501	EV-356583	R S-FIX H RH0615C 0.10W 332
VR502	EV-356581	R S-FIX H RH0615C 0.10W 331
VR551	EV-356583	R S-FIX H RH0615C 0.10W 332
VR552	EV-356581	R S-FIX H RH0615C 0.10W 331
VR701	EV-355380	R S-FIX H V8K4-11(1S) 0.10W202
VR702	EV-394561J	R S-FIX H V8K4-11(1S) 0.10W102
VR703	EV-355380	R S-FIX H V8K4-11(1S) 0.10W202
VR704	EV-394561J	R S-FIX H V8K4-11(1S) 0.10W102
VR901	EV-356577	R S-FIX H RH0615C 0.10W 103
VR902	EV-356577	R S-FIX H RH0615C 0.10W 103
VR951	EV-356577	R S-FIX H RH0615C 0.10W 103
VR952	EV-356577	R S-FIX H RH0615C 0.10W 103
X701	EI-719635	OSC CE KBR-4.19M 4.19MHZ

7. OPERATION P.C BOARD

Ref.No.	Part No.	Description
D801	ED-394723J	D LED GL3HY44 YELLOW
D802	ED-394723J	D LED GL3HY44 YELLOW
D803	ED-382365J	D LED SLR-34VC3F RED [HX-M830W]
D804	ED-394723J	D LED GL3HY44 YELLOW [HX-M830W]
D805	ED-394723J	D LED GL3HY44 YELLOW
D806	ED-394723J	D LED GL3HY44 YELLOW
D807	ED-394723J	D LED GL3HY44 YELLOW
D808	ED-382365J	D LED SLR-34VC3F RED
D809	ED-394723J	D LED GL3HY44 YELLOW
D810	ED-394723J	D LED GL3HY44 YELLOW
D811	ED-382365J	D LED SLR-34VC3F RED
D812	ED-382365J	D LED SLR-34VC3F RED
D813	ED-394723J	D LED GL3HY44 YELLOW
SW801	ES-390621J	SW SLIDE SSSF 01-03N [DOLBY]
SW802	ES-390621J	SW SLIDE SSSF 01-03N [R/P MODE,HX-M830W]
TS801	ES-394818J	SW TACT SOR-123HS T05 [STOP]
TS802	ES-394818J	SW TACT SOR-123HS T05 [FWD]
TS803	ES-394818J	SW TACT SOR-123HS T05 [REV]
TS804	ES-394818J	SW TACT SOR-123HS T05 [FF]
TS805	ES-394818J	SW TACT SOR-123HS T05 [RWD]
TS808	ES-394818J	SW TACT SOR-123HS T05 [OPERATION]
TS809	ES-394818J	SW TACT SOR-123HS T05 [AUTO MUTE]
TS810	ES-394818J	SW TACT SOR-123HS T05 [REC PAUSE]
TS811	ES-394818J	SW TACT SOR-123HS T05 [DUB X1]
TS812	ES-394818J	SW TACT SOR-123HS T05 [DUB X2]

FINAL ASSEMBLY



8. FINAL ASSEMBLY

Ref.No.	Part No.	Description
1A	BD-T2131A040A	PANEL FRONT BLK HX-M630W-B
1B	BD-T2131A040B	PANEL FRONT BLK HX-M830W-B
2A	BD-T2131A050A	LID PANEL(L) BLK HX-M630W-B
2B	BD-T2131A050B	LID PANEL(L) BLK HX-M830W-B
3A	BD-T2131A060A	LID PANEL(R) BLK HX-M630W-B
3B	BD-T2131A060B	LID PANEL(R) BLK HX-M830W-B
4	ZG-401852M	SP TORSION EJECT(L)
5	ZG-401853M	SP TORSION EJECT(R)
6A	BB-401096M	MECHA GAK-5PB-2 [TAPE-1,HX-M630W]
6B	BB-400945J	MECHA GAS3602D [TAPE-1,HX-M830W]
7A	BB-403466M	MECHA GAK3603D [TAPE-2,HX-M630W]
7B	BB-405194J	MECHA GAS-3601D [TAPE-2,HX-M830M]
8	SE-394092M	REFLECTOR
9	SE-394085M	LENS DUB
10	SK-401862M	BUTTON OPERATION
11	SK-394084M	KNOB SLIDE
12	MZ-380875J	DAMPER 1G88-L
13	SA-394127M1	FOOT REAR
14A	SP-401854M	PANEL REAR HX-M630W(U) [U]
14B	SP-401855M	PANEL REAR HX-M630W(E) [E]
14C	SP-401856M	PANEL REAR HX-M830W(U) [U]
14D	SP-401857M	PANEL REAR HX-M830W(E) [E]
15A	SP-394095M	COVER UPPER HX [HX-M630W]
15B	SP-396331M	COVER UPPER HX B [HX-M830W]
16	EW-390605J	WIRE ASSY T2127(B) 15P
17	ZS-387983J	ST BID30X08STL BNI EARTH LOCK
18	ZS-331182	BT BID30X08STL BNI
19	SZ-401094J	PUSH CATCH 3Y18
20	ZG-406105M	SP PLATE CASSETTE HOLDER(2)
21	SA-394136M	CUSHION FOOT
22	SZ-401762M	RING FOOT

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MEMO

ABBREVIATIONS (CASSETTE)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
AC	Alternating Current	MIN	MINute
A/D	Analog/Digital	MML	Maximum Modulation Level
AF	Auto Fader	MOL	Maximum Output Level
AMP	AMPlifier	MPX	Multi PleX
AR	Anti Recording	NC	Not Connected (No Connection)
AT BIAS	Auto Turning BIAS	NFB	Negative Feed Back
ATT	ATTenuator	NORM	NORMal
BAL	BALance	NR	Noise Reduction
BEF	Band Elimination Filter	OSC	OSCillator (OSCillation)
BSS	Blank Search System	P	Pulse
CAP M	CAPstan Motor	PB	Play Back
CH	CHannel	QMSS	Quick Memory Search System
COMP	COMParator	QR	Quick Reverse
CONT	CONTinuance	R CH	Right CHannel
CRLP	Computer Recording Level Processing	REC	RECord (RECording)
CS	Chip Select	REV	REVerse
D/A	Digital/Analog	ROT	ROTation
DC	Direct Current	REW	REWind
DET	DETector	SEC	SECond
DISCRI	DISCRIminator	SELE	SELEctor
DUB	DUBbing	SENS	SENSitivity
EQ	EQualizer	SEPP	Single Ended Push Pull
FF (or F.FWD)	Fast Foward	SIG	SIGnal
FLD	FLuoresent Display	SPECT	SPECTrum
FREQ	FREQuency	STD	STanDard
FWD	ForWarD	SW	SWitch
GND	GrouND	SYSCON	SYStem CONtrol
H	High	TP	Test Point
HPF	High Pass Filter	TRIG	TRIGa
IND	INDicator	VCA	Voltage Control Attenuator
IPLS	Instant Program Location System	VOL	VOLume
L	Low	VOLT	VOLtage
L CH	Left CHannel	VR	Variable Resistor
LED	Light Emitining Diode	X'TAL	cysTAL
MEMO	MEMOry	X1	Normal speed
MICOM	MIcroCOMputer	X2	Dubble speed

AKAI

MODEL HX-M630W
MODEL HX-M830W

SCHEMATIC DIAGRAMS AND PC BOARDS

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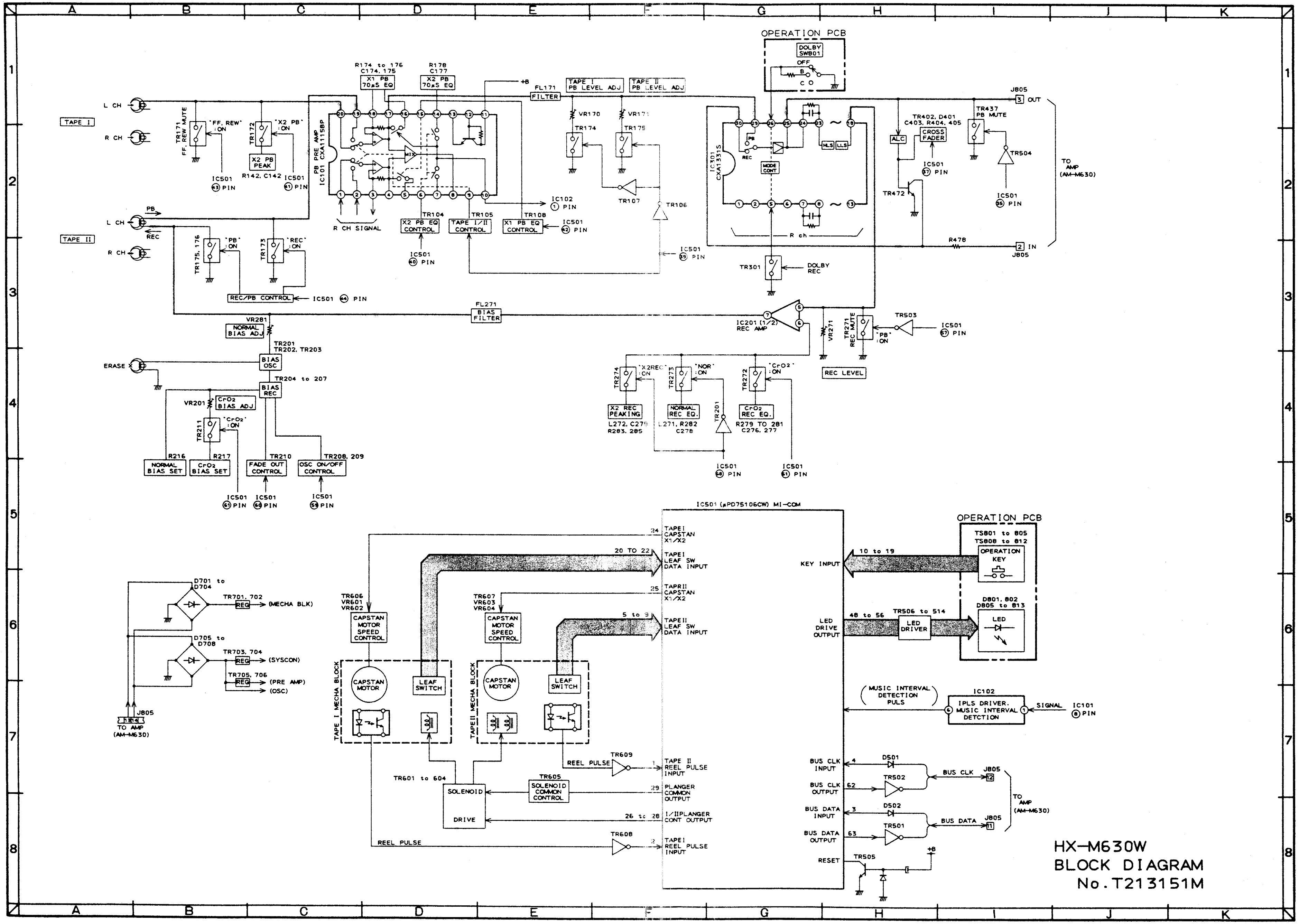
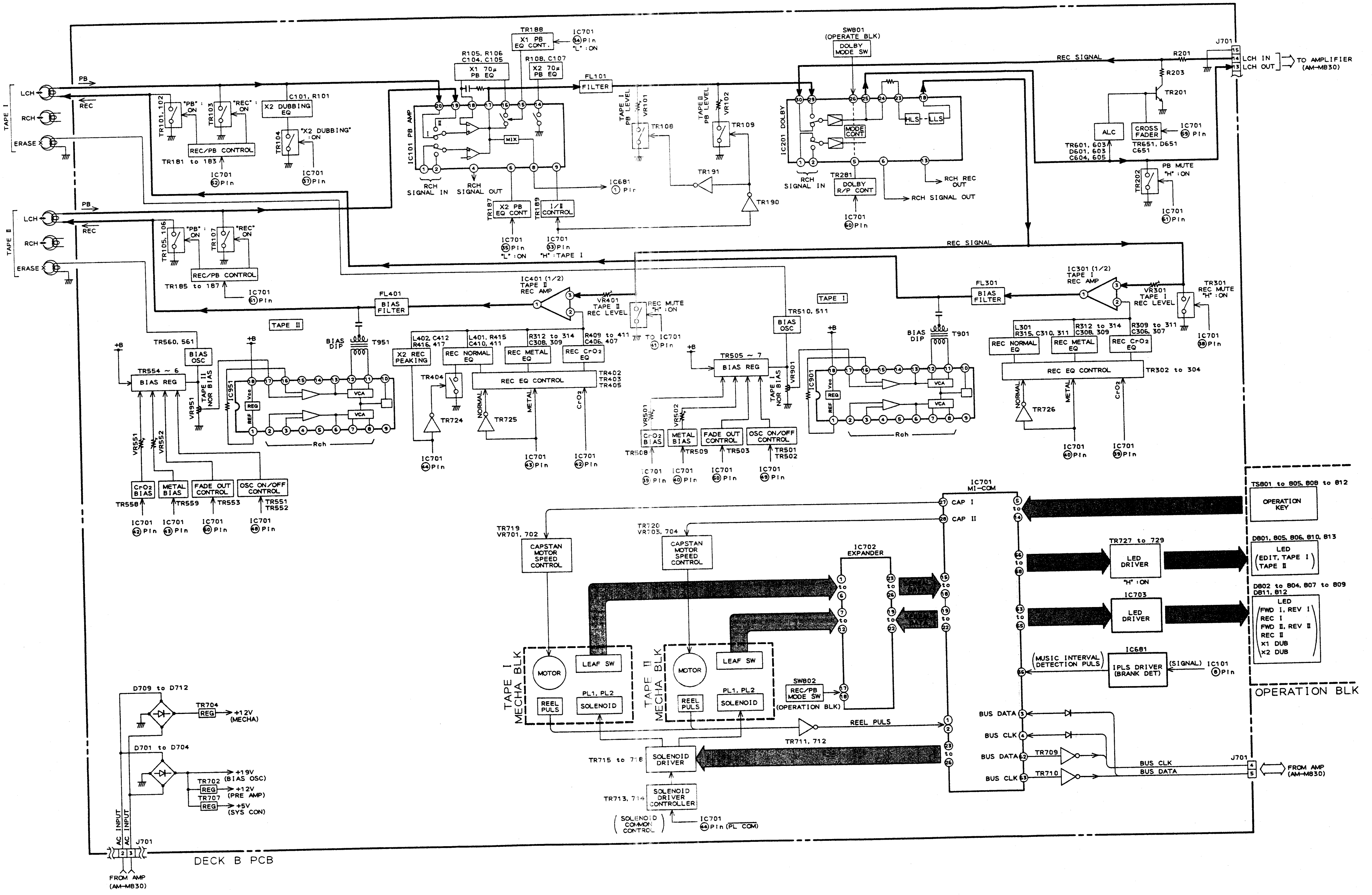
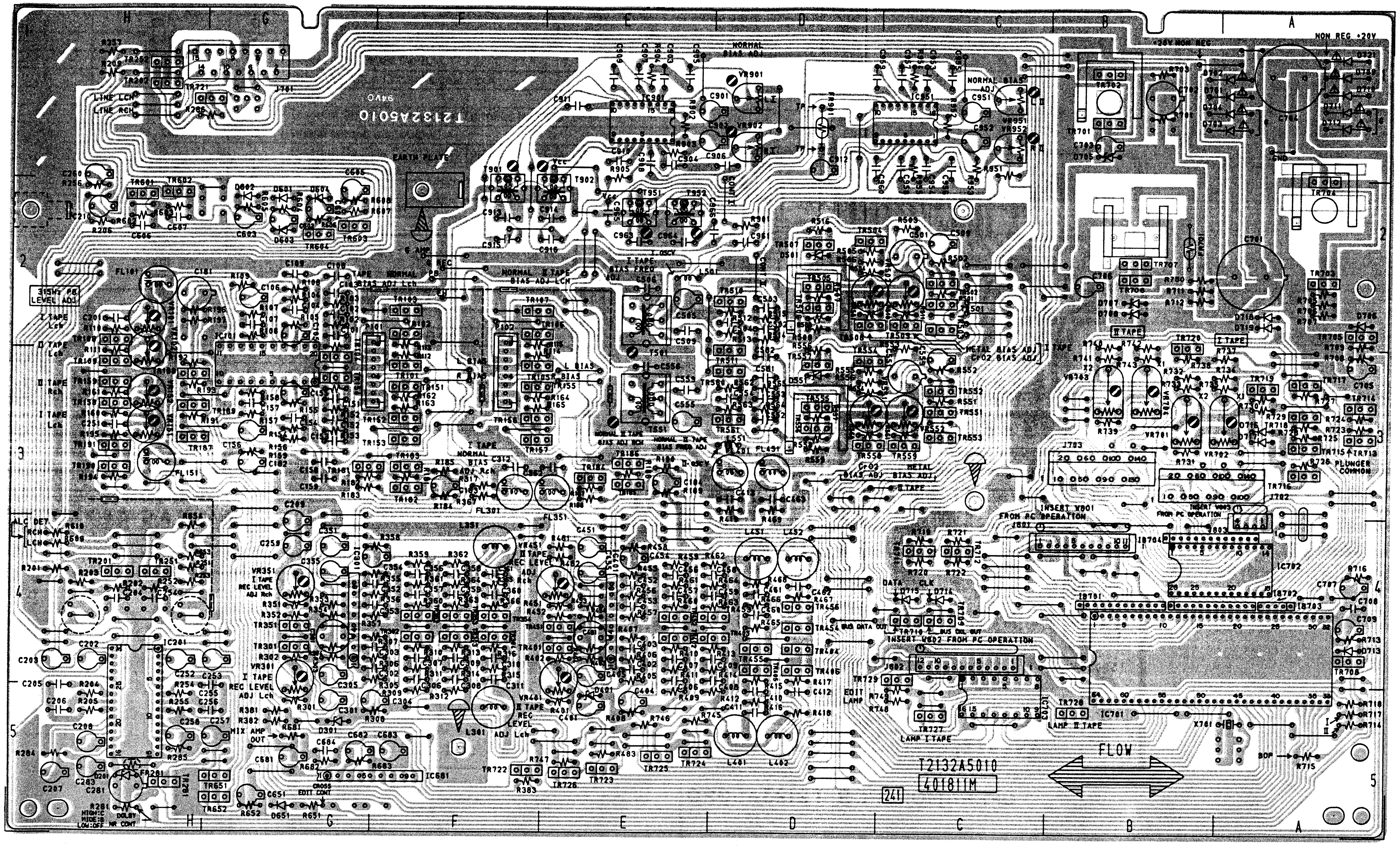


TAPE I
L CH
R CH
TR171 FF, REW MUTE
"FF, REW" :ON
TR172
"X2 PB" :ON
X2 PB PEAK
R142, C142
IC501 ㊸ PIN
IC501 ㊶ PIN
R174 to 176 C174, 175
X1 PB 70μS EQ
R178 C177
X2 PB 70μS EQ
+8
PB PRE AMP IC101 CXA1115BP
MIX
R CH SIGNAL
TR104
X2 PB EQ CONTROL
IC501 ㊵ PIN
TR105
TAPE I/II CONTROL
TR108
X1 PB EQ CONTROL
IC501 ㊷ PIN
IC102 ① PIN
FL171 FILTER
TAPE I PB LEVEL ADJ
TAPE II PB LEVEL ADJ
VR170
VR171
TR174
TR175
TR107
TR106
IC501 ㊴ PIN
TAPE II
PB
REC
TR175, 176
"PB" :ON
TR173
"REC" :ON
REC/PB CONTROL
IC501 ㊹ PIN
FL271 BIAS FILTER
VR281
NORMAL BIAS ADJ
TR201 TR202, TR203
ERASE
BIAS OSC
TR204 to 207
BIAS REC
VR201
CrO2 BIAS ADJ
TR211
"CrO2" :ON
R216
NORMAL BIAS SET
R217
CrO2 BIAS SET
TR210
FADE OUT CONTROL
TR208, 209
OSC ON/OFF CONTROL
IC501 ㊶ PIN
IC501 ㊹ PIN
IC501 ㊴ PIN
OPERATION PCB
DOLBY SW801
OFF
B
C O
IC101 CXA1331S
PB
REC
MODE CONT
HLS
LLS
R ch
TR301
DOLBY REC
IC201 (1/2) REC AMP
VR271
TR271 REC MUTE
"PB" :ON
TR503
IC501 ㊼ PIN
REC LEVEL
TR274
"X2REC" :ON
X2 REC PEAKING
L272, C279 R283, 285
TR273
"NOR" :ON
NORMAL REC EQ.
L271, R282 C278
TR201
TR272
"CrO2" :ON
CrO2 REC EQ.
R279 TO 281 C276, 277
IC501 ㊽ PIN
IC501 ㊶ PIN
ALC
TR402, D401 C403, R404, 405
CROSS FADER
IC501 ㊲ PIN
TR472
TR437 PB MUTE
TR504
IC501 ㊺ PIN
J805
③ OUT
② IN
J805
R478
TO AMP (AM-M630)
IC501 (μPD75106CW) MI-COM
TAPEI CAPSTAN X1/X2
TAPEI LEAF SW DATA INPUT
TAPRII CAPSTAN X1/X2
TAPEII LEAF SW DATA INPUT
24
20 TO 22
25
5 to 9
TR606 VR601 VR602
CAPSTAN MOTOR SPEED CONTROL
TR607 VR603 VR604
CAPSTAN MOTOR SPEED CONTROL
TAPE I MECHA BLOCK
TAPE II MECHA BLOCK
CAPSTAN MOTOR
LEAF SWITCH
TR609
REEL PULSE
TAPE II REEL PULSE INPUT
1
TR601 to 604
SOLENOID
DRIVE
TR605
SOLENOID COMMON CONTROL
29
PLANGER COMMON OUTPUT
26 to 28
I/IIPLANGER CONT OUTPUT
TR608
REEL PULSE
2
TAPEI REEL PULSE INPUT
KEY INPUT
10 to 19
OPERATION PCB
TS801 to 805 TS808 to 812
OPERATION KEY
LED DRIVE OUTPUT
48 to 56
TR506 to 514
LED DRIVER
D801, 802 D805 to 813
LED
MUSIC INTERVAL DETECTION PULS
IC102
IPLS DRIVER, MUSIC INTERVAL DETCTION
SIGNAL
IC101 ⑧ PIN
BUS CLK INPUT
4
D501
BUS CLK OUTPUT
62
TR502
BUS CLK
J805 ⑫
BUS DATA INPUT
3
D502
BUS DATA OUTPUT
63
TR501
BUS DATA
J805 ⑪
TO AMP (AM-M630)
RESET
TR505
+8
D701 to D704
TR701, 702
REG (MECHA BLK)
D705 to D708
TR703, 704
REG (SYSCON)
TR705, 706
REG (PRE AMP)
(OSC)
J805
TO AMP (AM-M630)
A B C D E F G H I J K
1 2 3 4 5 6 7 8

HX-M630W
BLOCK DIAGRAM
No.T213151M


TAPE I
LCH
RCH
ERASE
PB
REC
TR101, 102
"PB" : ON
TR103
"REC" : ON
REC/PB CONTROL
TR181 to 183
IC701 52 Pin
C101, R101
X2 DUBBING EQ
TR104
"X2 DUBBING" : ON
IC701 57 Pin
R105, R106 C104, C105
X1 70μ PB EQ
TR188
X1 PB EQ CONT.
IC701 54 Pin "L" : ON
R108, C107
X2 70μ PB EQ
IC101 PB AMP
MIX
RCH SIGNAL IN
RCH SIGNAL OUT
TR187
X2 PB EQ CONT
TR189
I/II CONTROL
IC701 55 Pin "L" : ON
IC701 53 Pin "H" : TAPE I
IC681 1 Pin
FL101 FILTER
TAPE I PB LEVEL VR101
TR108
TAPE II PB LEVEL VR102
TR109
TR191
TR190
SW801 (OPERATE BLK)
DOLBY MODE SW
IC201 DOLBY
MODE CONT
HLS
LLS
RCH SIGNAL IN
TR281
DOLBY R/P CONT
IC701 60 Pin
RCH REC OUT
RCH SIGNAL OUT
REC SIGNAL
R201
R203
TR201
J701
LCH IN
LCH OUT
TO AMPLIFIER (AM-M830)
ALC
CROSS FADER
IC701 59 Pin
TR601, 603 D601, 603 C604, 605
TR651, D651 C651
TR202
PB MUTE "H" : ON
IC701 61 Pin
TAPE II
LCH
RCH
ERASE
PB
REC
TR105, 106
"PB" : ON
TR107
"REC" ON
REC/PB CONTROL
TR185 to 187
IC701 61 Pin
REC SIGNAL
IC401 (1/2) TAPE II REC AMP
VR401 TAPE II REC LEVEL
REC MUTE "H" : ON
TO IC701 41 Pin
FL401 BIAS FILTER
TAPE II
BIAS DIP
T951
TR560, 561
BIAS OSC
+B
TR554 ~ 6
BIAS REG
TAPE II NOR BIAS VR951
IC951
Vcc
REG
REF
VCA
Rch
VR551
VR552
CrO2 BIAS
METAL BIAS
FADE OUT CONTROL
OSC ON/OFF CONTROL
TR558
TR559
TR553
TR551 TR552
IC701 42 Pin
IC701 43 Pin
IC701 50 Pin
IC701 48 Pin
L402, C412 R416, 417
X2 REC PEAKING
L401, R415 C410, 411
REC NORMAL EQ
R312 to 314 C308, 309
REC METAL EQ
R409 to 411 C406, 407
REC CrO2 EQ
REC EQ CONTROL
TR402 TR403 TR405
TR404
TR724
NORMAL
TR725
METAL
CrO2
IC701 44 Pin
IC701 43 Pin
IC701 42 Pin
TAPE I
TR510, 511
BIAS OSC
+B
TR505 ~ 7
BIAS REG
TAPE I NOR BIAS VR901
IC901
VR501
VR502
CrO2 BIAS
METAL BIAS
FADE OUT CONTROL
OSC ON/OFF CONTROL
TR508
TR509
TR503
TR501 TR502
IC701 39 Pin
IC701 40 Pin
IC701 50 Pin
IC701 49 Pin
BIAS DIP
T901
Rch
FL301 BIAS FILTER
IC301 (1/2) TAPE I REC AMP
VR301 TAPE I REC LEVEL
TR301 REC MUTE "H" : ON
IC701 38 Pin
L301 R315, C310, 311
REC NORMAL EQ
R312 to 314 C308, 309
REC METAL EQ
R309 to 311 C306, 307
REC CrO2 EQ
REC EQ CONTROL
TR302 to 304
NORMAL
METAL
CrO2
TR726
IC701 40 Pin
IC701 39 Pin
IC701 MI-COM
CAP I
CAP II
TR719 VR701, 702
CAPSTAN MOTOR SPEED CONTROL
TR720 VR703, 704
CAPSTAN MOTOR SPEED CONTROL
IC702 EXPANDER
1 to 6
7 to 12
23 to 26
19 to 22
15 to 18
19 to 22
TAPE I MECHA BLK
MOTOR
LEAF SW
REEL PULS
PL1, PL2 SOLENOID
TAPE II MECHA BLK
MOTOR
LEAF SW
REEL PULS
PL1, PL2 SOLENOID
SW802 REC/PB MODE SW (OPERATION BLK)
REEL PULS
TR711, 712
TR715 to 718
SOLENOID DRIVER
23 to 26
TR713, 714
SOLENOID DRIVER CONTROLLER
(SOLENOID COMMON CONTROL)
IC701 44 Pin (PL COM)
5 to 14
66 to 68
63 to 65
TS801 to 805, 808 to 812
OPERATION KEY
TR727 to 729
LED DRIVER
"H" : ON
D801, 805, 806, 810, 813
LED (EDIT, TAPE I TAPE II)
IC703
LED DRIVER
D802 to 804, 807 to 809 D811, 812
LED (FWD I, REV I REC I FWD II, REV II REC II x1 DUB x2 DUB)
IC681
(MUSIC INTERVAL DETECTION PULS)
IPLS DRIVER (BRANK DET)
(SIGNAL) IC101 8 Pin
OPERATION BLK
BUS DATA
BUS CLK
BUS DATA
BUS CLK
TR709
TR710
BUS CLK
BUS DATA
J701
FROM AMP (AM-M830)
D709 to D712
TR704
REG
+12V (MECHA)
D701 to D704
+19V (BIAS OSC)
TR702
REG
+12V (PRE AMP)
TR707
REG
+5V (SYS CON)
AC INPUT
AC INPUT
J701
FROM AMP (AM-M830)
DECK B PCB

HX-M830W
BLOCK DIA
No. T213


A
B
C
D
E
F
G
H
1
2
3
4
5
NON REG +20V
+20V NON REG
NORMAL BIAS ADJ
EARTH PLATE
T2132A5010
94VO
LINE Lch
LINE Rch
315Hz PB LEVEL ADJ
ALC DET
I TAPE Lch
II TAPE Lch
II TAPE Rch
I TAPE Rch
I TAPE NORMAL BIAS ADJ Rch
NORMAL II TAPE BIAS ADJ Lch
I TAPE NORMAL BIAS ADJ Lch
METAL BIAS ADJ
VR351 I TAPE REC LEVEL ADJ Rch
VR301 I TAPE REC LEVEL ADJ Lch
VR451 II TAPE REC LEVEL ADJ
VR401 II TAPE REC LEVEL ADJ Lch
MIX AMP OUT
EDIT CONT
INSERT VB01 FROM PC OPERATION
INSERT VB02 FROM PC OPERATION
PLUNGER COMMON
DATA
CLK
BUS DATA OUT
BUS CLK OUT
EDIT LAMP
LAMP I TAPE
LAMP II TAPE
I TAPE
II TAPE
BOP
FLOW
T2132A5010
401811M
241
HIGH:C
MID:B
LOW:OFF
DOLBY NR CONT

DECK B PCB T2132A5010

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

PRINCIPAL PARTS LOCATION

ICS

IC101	G3
IC201	H5
IC301	G4
IC401	E4
IC681	F,G4
IC701	A,B4
IC702	A4
IC703	C5
IC901	E1
IC951	C1

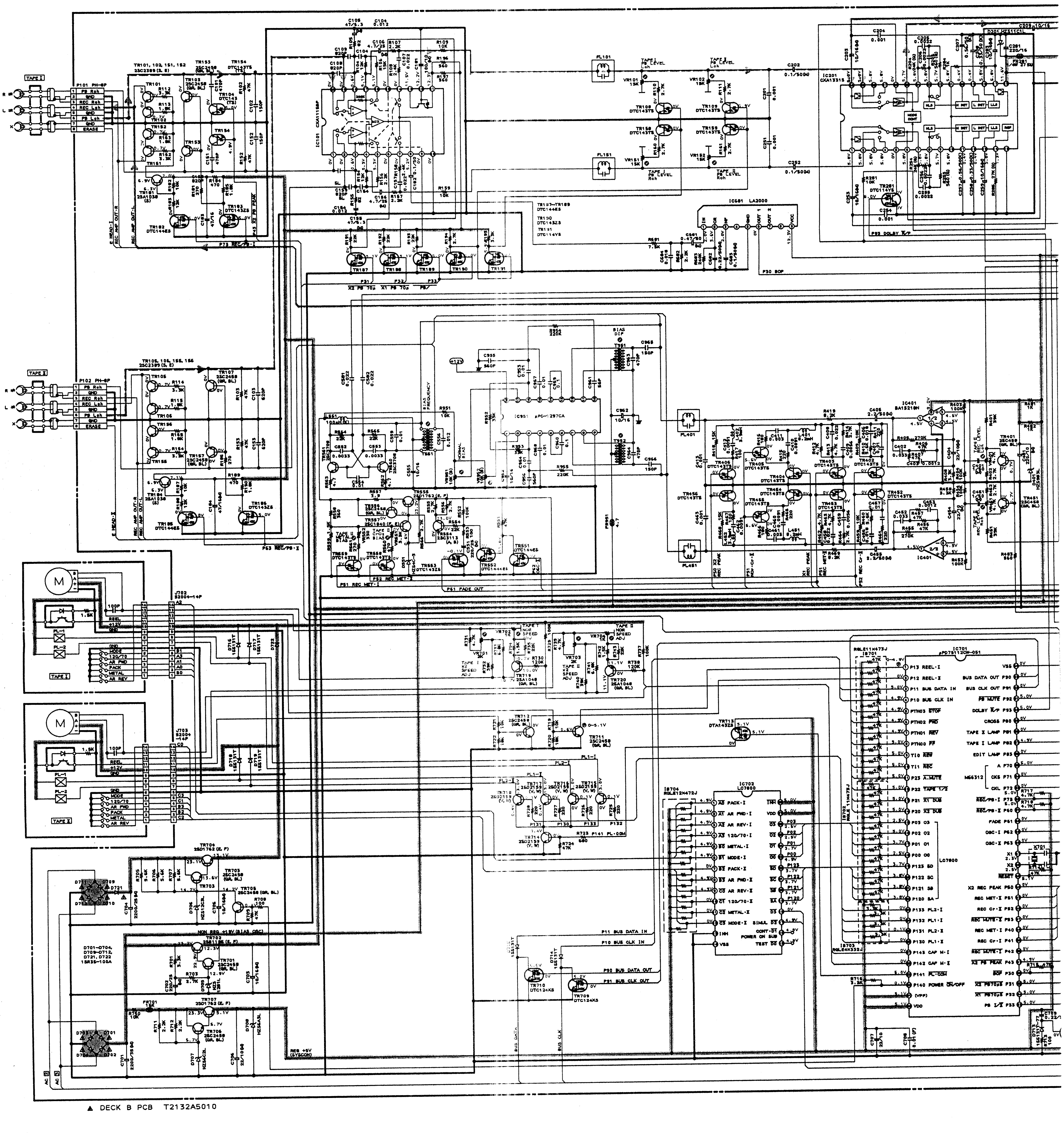
CONNECTORS

P101	F3
P102	F3
J701	G1
J702	A,B3
J703	B3
J801	B4
J802	C4
J803	A4

TRANSISTORS

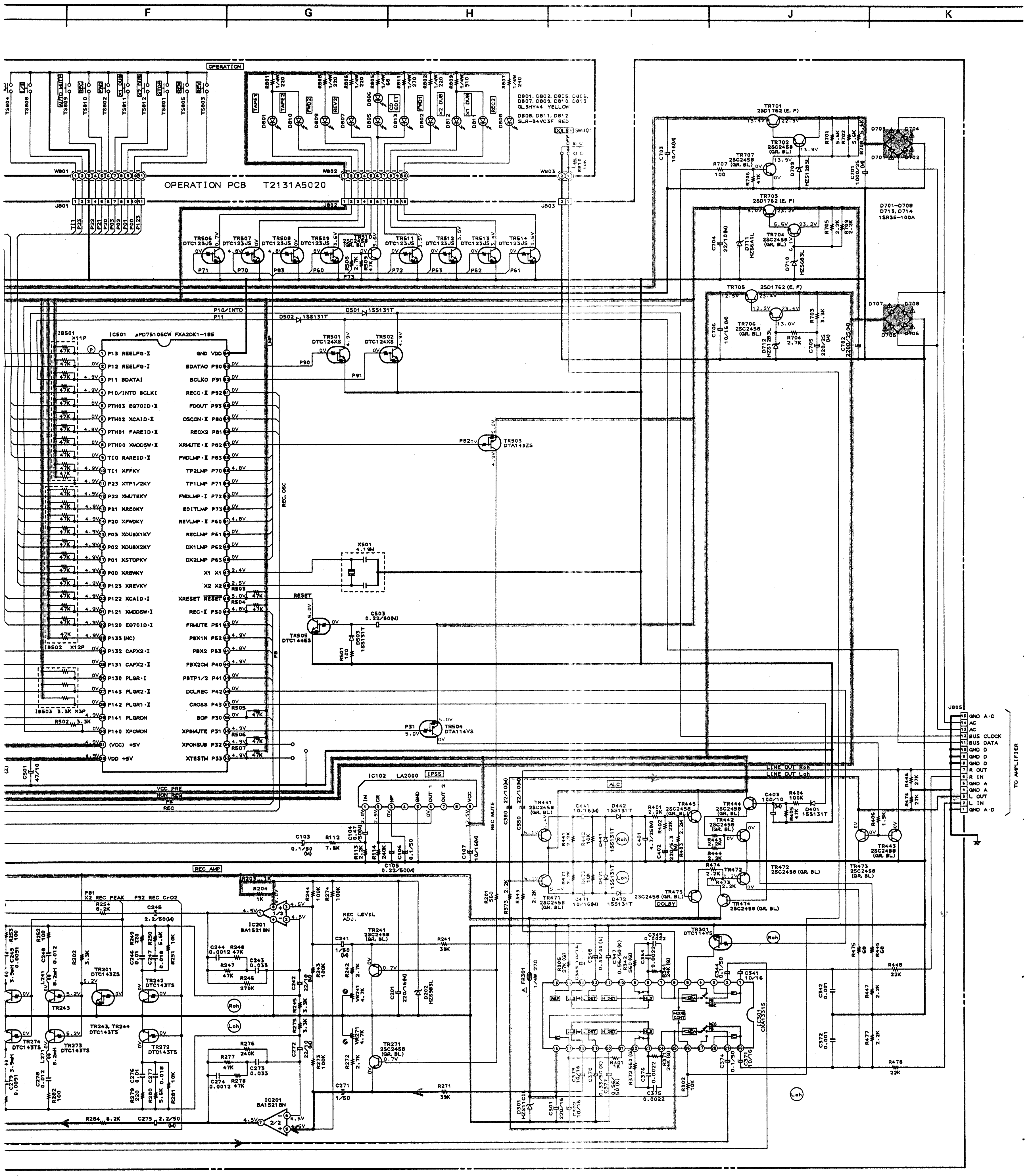
TR101	F3
TR102	F2
TR103	F2
TR104	G3
TR105	F3
TR106	F2
TR107	F2
TR108	H2
TR109	H2
TR151	F3
TR152	F3
TR153	F3
TR154	G3
TR155	F3
TR156	F3
TR157	F3
TR158	H2
TR159	H2
TR181	G3
TR182	F3
TR183	F3
TR184	E3
TR185	E3
TR186	E3
TR187	H3
TR188	H3
TR189	H3
TR190	H3
TR191	H3
TR201	H4
TR202	H1
TR251	H4
TR252	H1
TR281	H5
TR301	G4
TR302	F4
TR303	F4
TR304	F4
TR351	G4
TR352	F4
TR353	F4
TR354	F4
TR401	E4
TR402	E4
TR403	D4
TR404	D4
TR405	D4
TR406	D4
TR451	E4
TR452	E4
TR453	D4
TR454	D4
TR455	D4
TR456	D4
TR501	C2
TR502	C2
TR503	C2
TR504	D2
TR505	D2
TR506	D2
TR507	D2
TR508	D2
TR509	C2
TR510	D2
TR511	D2
TR551	C3
TR552	C3
TR553	D3
TR554	C3
TR555	D3
TR556	D3
TR557	D3
TR558	D3
TR559	C3
TR560	D3
TR561	D3
TR601	H2
TR602	H2
TR603	G2
TR604	G2
TR651	G5
TR652	G5
TR701	B1
TR702	B1
TR703	A2
TR704	A1
TR705	A2
TR706	B2
TR707	B2
TR708	A4
TR709	C4
TR710	C4
TR711	C4
TR712	C4
TR713	A3
TR714	A3
TR715	A3
TR716	A3
TR717	A3
TR718	A3
TR719	A3
TR720	B2
TR721	G1
TR722	F5
TR723	E5
TR724	E5
TR725	E5
TR726	E5
TR727	C5
TR728	B5
TR729	C4

A B C D E F G


TAPE I
P101 PH-8P
PB Rch
GND
REC Rch
REC Lch
GND
PB Lch
GND
ERASE
TR101, 102, 151, 152
2SC2389 (S, E)
TR153
TR154
IC101 CXA1116P
PL101
PL151
TAPE I PB LEVEL Lch
TAPE II PB LEVEL Lch
VR101
VR102
VR151
VR152
TAPE I PB LEVEL Rch
TAPE II PB LEVEL Rch
C202 0.1/50DD
C252 0.1/50DD
IC201 CXA1331S
D201 HZS11C1L
P92 DOLBY B/P
IC581 LA2000
P30 BOP
TR187
TR188
TR189
TR190
TR191
X2 PB 70μ
X1 PB 70μ
TR187~TR189 DTC144ES
TR190 DTC143ZS
TR191 DTC114YS
P73 REC/PB·I
P63 REC/PB·II
TAPE II
P102 PH-8P
TR105, 106, 155, 156
2SC2389 (S, E)
BIAS FREQUENCY
IC951 μPC1297CA
BIAS DIP
T951
T952
T561
IC401 BA15218N
PL401
PL451
P61 FADE OUT
P51 REC MET·I
P52 REC MET·II
J702 S2004-14P
J703 S2004-14P
REEL
+12V
GND
MODE
120/70
AR FWD
PACK
METAL
AR REV
TAPE I
TAPE II
PL-1
PL-2
M
VR701
VR702
VR703
TAPE I NOR SPEED ADJ
TAPE II NOR SPEED ADJ
TAPE I SPEED ADJ
TAPE II SPEED ADJ
TR719 2SA1048 (GR, BL)
TR720 2SA1048 (GR, BL)
TR712 2SC2458 (GR, BL)
TR711 2SC2458 (GR, BL)
DTA143ZS
TR713
IC702 LC7800
IC701 μPD75112CW-051
RB704 RGLE1H472J
RB701
RB702
RB703
P11 BUS DATA IN
P10 BUS CLK IN
P90 BUS DATA OUT
P91 BUS CLK OUT
TR710 DTC124XS
TR709 DTC124XS
TR704 2SD1762 (E, F)
TR703
TR705
TR701 2SC2458 (GR, BL)
TR702 2SB1186 (E, F)
TR707 2SD1762 (E, F)
TR706 2SC2458 (GR, BL)
D701~D704, D709~D712, D721, D722 1SR35-100A
NON REG +15V (BIAS OSC)
REG +5V (SYSCON)
P141 PL-COM
P140 POWER ON/OFF
VSS
VDD
M66312
X701
AC

▲ DECK B PCB T2132A5010

A B C D E F G


F
G
H
I
J
K
OPERATION
OPERATION PCB T2131A5020
W801
J801
W802
J802
W803
J803
D801, D802, D805, D806, D807, D809, D810, D813 GL3HY44 YELLOW
D808, D811, D812 SLR-34VC3F RED
DOLBY SW801
TR701 2SD1762 (E, F)
TR702 2SC2458 (GR, BL)
TR703 2SD1762 (E, F)
TR704 2SC2458 (GR, BL)
TR705 2SD1762 (E, F)
TR706 2SC2458 (GR, BL)
TR707 2SC2458 (GR, BL)
D701–D708 D713, D714 1SR35-100A
IC501 µPD75106CW FXA2DK1-185
IB501 K11P
IB502 X12P
IB503 3.3K X3P
X501 4.19M
TR501 DTC124XS
TR502 DTC124XS
TR503 DTA143ZS
TR504 DTA114YS
TR505 DTC144ES
TR506 DTC123JS
TR507 DTC123JS
TR508 DTC123JS
TR509 DTC123JS
TR510 2SC2458 (GR, BL)
TR511 DTC123JS
TR512 DTC123JS
TR513 DTC123JS
TR514 DTC123JS
REC OSC
IC102 LA2000
IPSS
ALC
DOLBY
REC AMP
IC201 BA15218N
REC LEVEL ADJ.
TR301 DTC114YS
IC301 CXA1331S
J805
GND A·D
AC
AC
BUS CLOCK
BUS DATA
GND D
GND D
GND D
R OUT
R IN
GND A
GND A
L OUT
L IN
GND A·D
TO AMPLIFIER
LINE OUT Roh
LINE OUT Loh
VCC PRE
NON REG
PB
REC

▬▬▬ : B (POWER SUPPLY) LINE

――― : REC SIGNAL LINE

– – – – : PB SIGNAL LINE

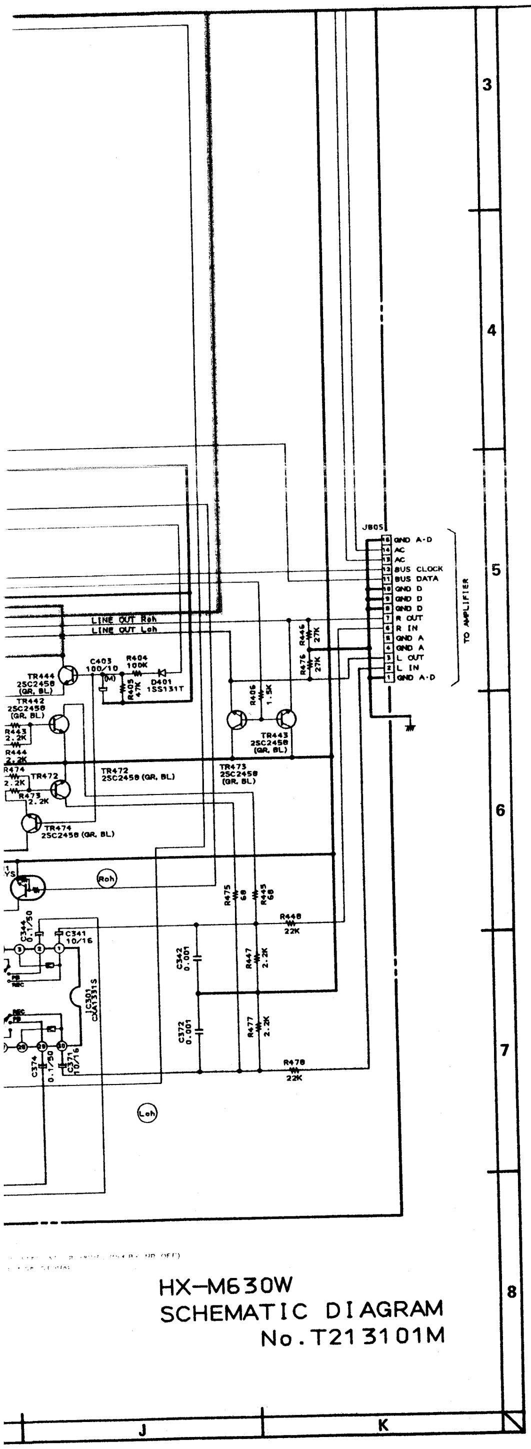
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨. ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50WV (J)

VOLTAGE INDICATES AT PB MODE. (DOLBY NR OFF)
Ⓟ MARK IS PULSE SIGNAL.

HX–M630W
SCHEMATIC DIAGRAM
No.T213101M


3
4
5
6
7
8
J
K
J805
GND A-D
AC
AC
BUS CLOCK
BUS DATA
GND D
GND D
GND D
R OUT
R IN
GND A
GND A
L OUT
L IN
GND A-D
TO AMPLIFIER
LINE OUT Rch
LINE OUT Lch
C403 100/10
R404 100K
D401 1SS131T
R405 47K
TR444 2SC2458 (GR, BL)
TR442 2SC2458 (GR, BL)
TR472 2SC2458 (GR, BL)
TR474 2SC2458 (GR, BL)
TR443 2SC2458 (GR, BL)
TR473 2SC2458 (GR, BL)
R406 1.5K
R476 27K
R446 27K
R475 68
R445 68
R448 22K
R447 2.2K
R477 2.2K
R478 22K
C342 0.001
C372 0.001
C341 10/16
C371 10/16
C344 0.1/50
C374 0.1/50
IC301 CXA1331S
Rch
Lch

HX-M630W
SCHEMATIC DIAGRAM
No.T213101M

PRINCIPAL PARTS LOCATION

ICS

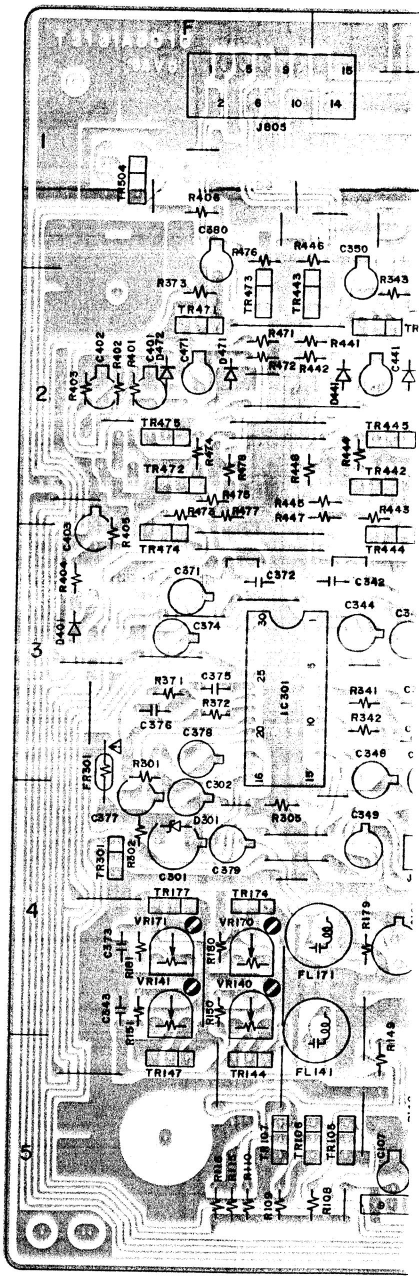
IC101	E4
IC102	E5
IC201	D2
IC301	F3
IC501	A,B4

CONNECTORS

J801	A3
J802	B5
J803	E4
J804	C4
J805	F1
J806	A3
P801	D5
P802	D4

TRANSISTORS

TR101	C5
TR102	C5
TR103	C4
TR104	D5
TR105	E5
TR106	E5
TR107	F5
TR108	C5
TR141	D5
TR142	D5
TR143	D4
TR144	F5
TR145	D4
TR146	D4
TR147	F5
TR171	C5
TR172	C5
TR173	D4
TR174	F4
TR175	C4
TR176	C4
TR177	F4
TR201	C3
TR202	C3
TR203	C3
TR204	C2
TR205	C2
TR206	C2
TR207	C2
TR208	B2
TR209	C2
TR210	C3
TR211	C3
TR241	E2
TR242	D3
TR243	D3
TR244	E3
TR271	D2
TR272	D3
TR273	D3
TR274	D3
TR301	F4
TR441	E2
TR442	E2
TR443	E2
TR444	E3
TR445	E2
TR471	F2
TR472	F2
TR473	F2
TR474	F3
TR475	F2
TR501	C4
TR502	C4
TR503	C5
TR504	F1
TR505	A5
TR506	B5
TR507	B5
TR508	B5
TR509	B5
TR510	B5
TR511	B5
TR512	B5
TR513	B5
TR514	B5
TR601	A2
TR602	A2
TR603	A2
TR604	A2
TR605	A2
TR606	A3
TR607	B2
TR608	B3
TR609	B3
TR701	A1
TR702	A1
TR703	C1
TR704	C1
TR705	D1
TR706	C1
TR707	A1


F
1
2
3
4
5
J805
TR504
R406
C380
R476
R446
C350
R373
R343
TR473
TR443
TR471
C402
R402
R401
C401
D472
C471
D471
R471
R441
R472
R442
D441
C441
R403
TR475
TR445
TR472
R474
R478
R448
R444
TR442
R475
R445
R447
R473
R477
R443
C403
R405
TR474
TR444
R404
C371
C372
C342
C344
D401
C374
R371
C375
R372
C376
C378
IC301
R341
R342
FR301
R301
C302
C348
C377
D301
R305
C349
TR301
R302
C301
C379
TR177
TR174
VR171
VR170
C373
R181
R160
R179
FL171
VR141
VR140
C343
R151
R150
R149
TR147
TR144
FL141
TR107
TR106
TR105
C107
R109
R108

PRINCIPAL PARTS LOCATION

ICS

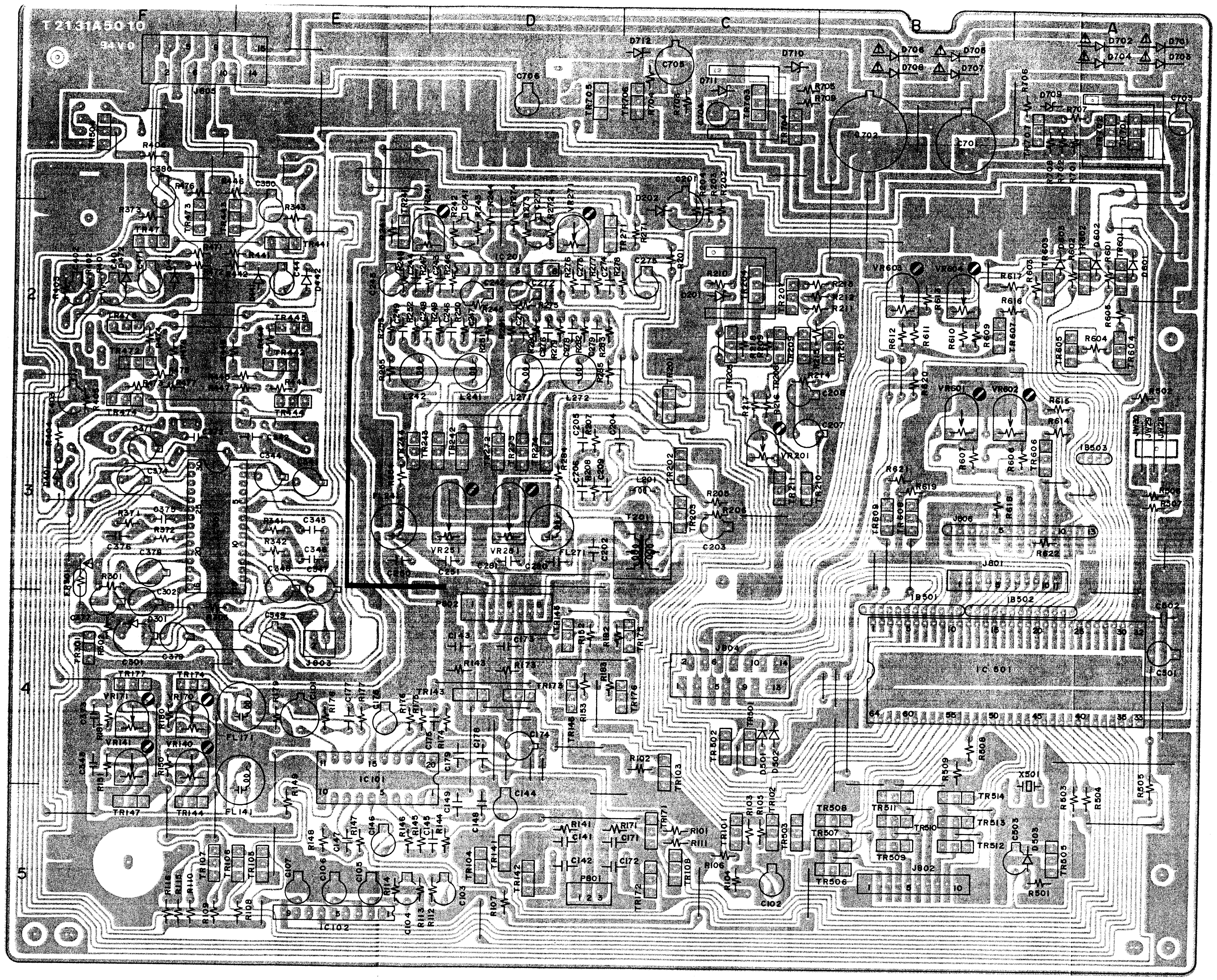
IC101	E4
IC102	E5
IC201	D2
IC301	F3
IC501	A,B4

CONNECTORS

J801	A3
J802	B5
J803	E4
J804	C4
J805	F1
J806	A3
P801	D5
P802	D4

TRANSISTORS

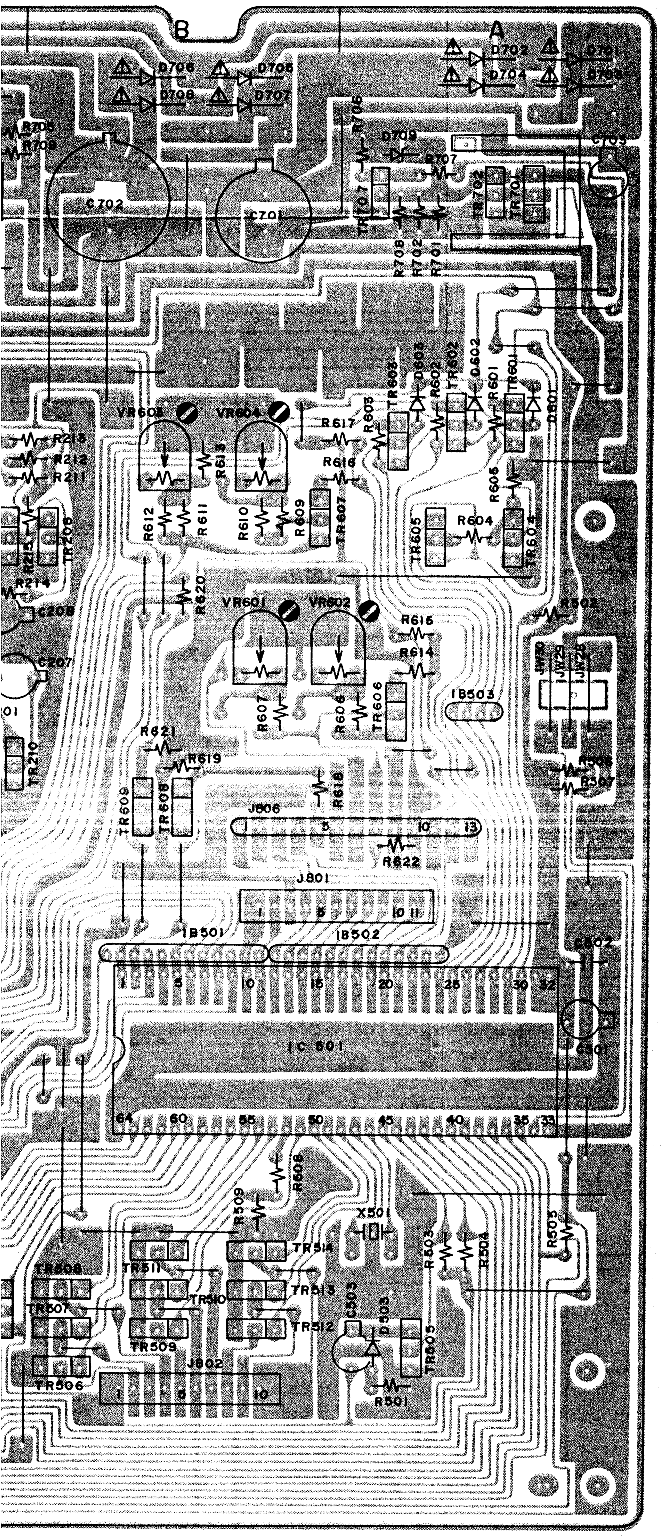
TR101	C5
TR102	C5
TR103	C4
TR104	D5
TR105	E5
TR106	E5
TR107	F5
TR108	C5
TR141	D5
TR142	D5
TR143	D4
TR144	F5
TR145	D4
TR146	D4
TR147	F5
TR171	C5
TR172	C5
TR173	D4
TR174	F4
TR175	C4
TR176	C4
TR177	F4
TR201	C3
TR202	C3
TR203	C3
TR204	C2
TR205	C2
TR206	C2
TR207	C2
TR208	B2
TR209	C2
TR210	C3
TR211	C3
TR241	E2
TR242	D3
TR243	D3
TR244	E3
TR271	D2
TR272	D3
TR273	D3
TR274	D3
TR301	F4
TR441	E2
TR442	E2
TR443	E2
TR444	E3
TR445	E2
TR471	F2
TR472	F2
TR473	F2
TR474	F3
TR475	F2
TR501	C4
TR502	C4
TR503	C5
TR504	F1
TR505	A5
TR506	B5
TR507	B5
TR508	B5
TR509	B5
TR510	B5
TR511	B5
TR512	B5
TR513	B5
TR514	B5
TR601	A2
TR602	A2
TR603	A2
TR604	A2
TR605	A2
TR606	A3
TR607	B2
TR608	B3
TR609	B3
TR701	A1
TR702	A1
TR703	C1
TR704	C1
TR705	D1
TR706	C1
TR707	A1

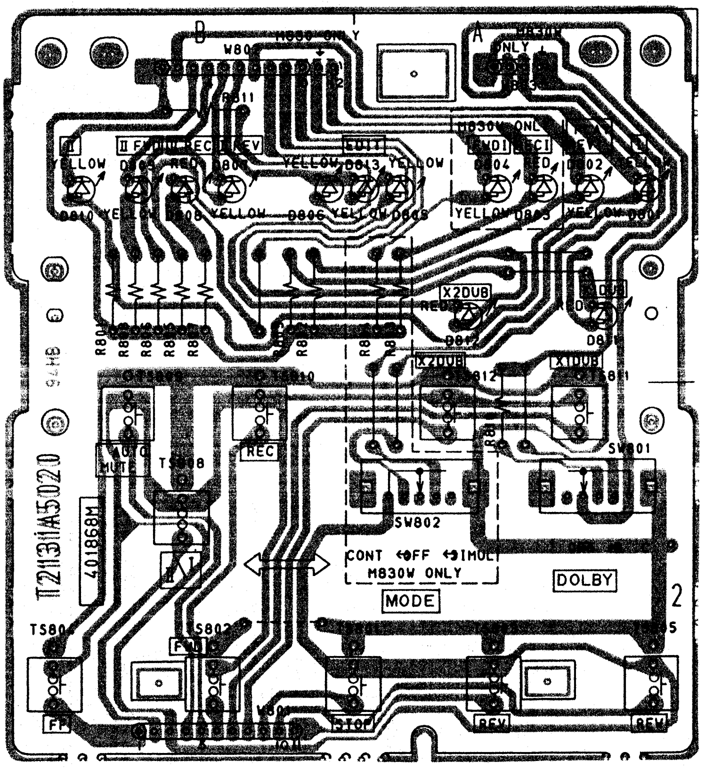


DECK A PCB T2131A5010

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


B
A
D706
D705
D708
D707
D702
D701
D704
D703
D709
R707
R706
C702
C701
C703
TR702
TR701
TR707
R708
R702
R701
VR603
VR604
R617
R616
R605
TR603
D603
R602
TR602
D602
R601
TR601
D601
R606
R604
TR605
TR604
R612
R611
R613
R610
R609
TR607
R620
VR601
VR602
R615
R614
R607
R606
TR606
IB503
R621
R619
TR609
TR608
R618
R503
R507
J806
J801
R622
IB501
IB502
C502
IC 501
C501
R508
R509
X501
TR514
TR511
TR510
TR513
TR512
C503
D503
R503
R504
R505
TR508
TR507
TR509
TR506
TR505
J802
R501
R213
R212
R211
R215
TR205
R214
C208
C207
TR210


B
A
W801
M830 ONLY
M830W ONLY
YELLOW
RED
YELLOW
YELLOW
D810
D808
D806
D805
D813
D804
D803
D802
D801
X2DUB
X1DUB
D812
D811
AUTO MUTE
TS808
REC
SW802
SW801
CONT ⟺OFF ⟺IMOL
M830W ONLY
MODE
DOLBY
401868M
T2131A5020
TS801
TS802
FF
STOP
REW
REV
2
OPERATION PCB T2123A5020

RNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
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RECOMMENDED PARTS

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